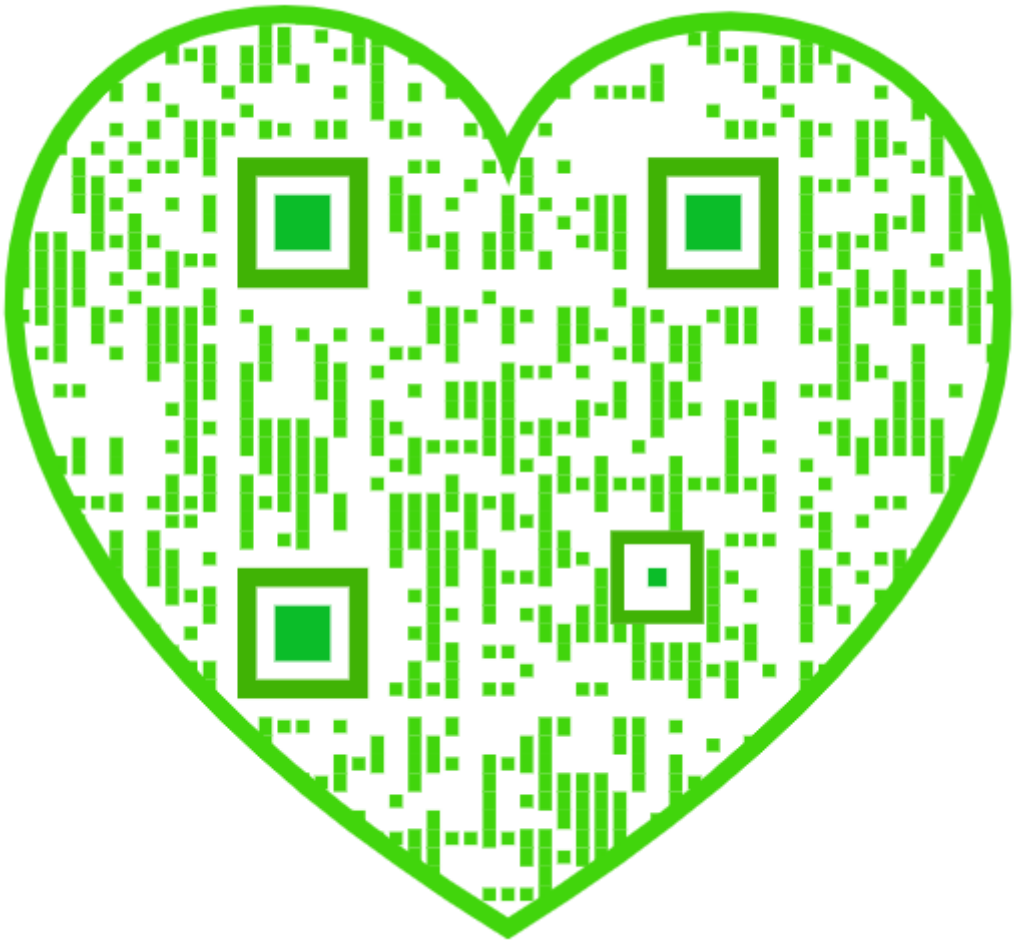
FISHING KITS AND EQUIPMENT

By SAMUEL G. CAMP



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FISHING KITS AND EQUIPMENT

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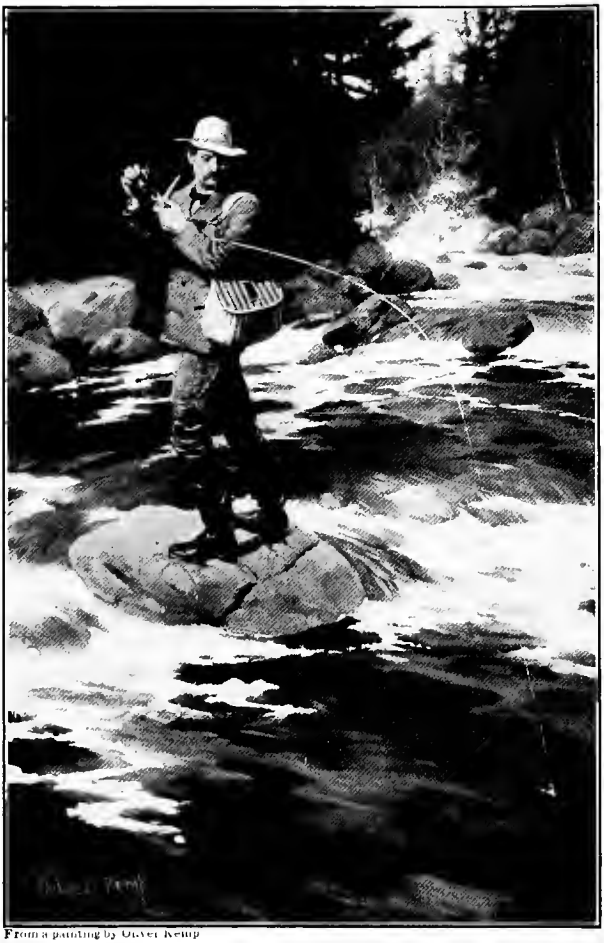

From a painting by Oliver Kemp

An Unexpected Strike

FISHING KITS AND EQUIPMENT

BY

SAMUEL G. CAMP

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NEW YORK

TO THE

"MEN I HAVE FISHED WITH"

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Credit is due also to Mr. Edward Cave of *Recreation* for the use of several photographs.

SAMUEL G. CAMP.

CANAAN, CONNECTICUT.

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FISHING KITS AND EQUIPMENT

CHAPTER I

THE PRELIMINARY CAST

And let us buy for the days of spring
While yet the north winds blow!
For half the joy of the trip, my boy,
Is getting your traps to go.
The Tent Dwellers.

ANGLERS, so far as the tackle question is concerned, may be divided into two classes; those who make their own rods, flies and certain other items of the fishing kit, and those who from lack of mechanical ability or time, or perhaps inclination, buy their tackle. That this latter class is very greatly in the majority goes without saying; and it is equally certain that a large part of the tackle bought is entirely unsuited, for various reasons, to the purpose for which it was intended. The man who is a beginner at any form of angling and goes to the

tackle shop with the idea of purchasing an outfit, say for fly-fishing for trout, frequently comes away with an assortment of junk utterly useless for that purpose. On the stream the outfit naturally proves far from a success — whereupon the fisherman concludes that fly-fishing is not for him, or any man in his senses, smashes or sells the tackle and goes out of business permanently. Also, since the various forms of angling are very unlike, it is quite possible for a man to be an expert in one branch of the sport and a novice at another. The great number of fly-casters who have recently taken up bait-casting from the reel is an instance of this.

It is the writer's purpose to treat systematically the subject of tackle and, in addition, to suggest what tackle to select for the brook trout, the black bass, and other sweet-water game fishes. The reader is duly warned that he will seek in vain herein for exciting tales of mortal combats with huge bass or trout — for fish stories of any sort, either alleged or experienced. Neither are there picturesque descriptions of the mountain trout stream or the forest-bordered bass lake. Also, learned discussion or academic theorizing anent the haunts and habits of fishes must be sought elsewhere. We are here strictly concerned with the practical, unsung side of the subject — how to outfit for a trout, bass or other fishing trip; how to select a good fly- or bait-casting rod; how the rods are made and how they should be used; the proper selection of reels,

lines, flies and other tools and tackle; and matters of like nature. All of which things, it is respectfully submitted, are, in a way, of some small value to a fisherman.

Necessarily, in view of the subject-matter, there will be much "shop talk," and to some it may seem that there is considerable hair-splitting regarding what is likely to prove satisfactory and what is not. In answer to such an objection, one might say that, as a matter of fact, the whole subject of tackle is of strictly secondary importance — absolutely subservient to the real purpose of the sport, the hardy outdoor life of the woods and streams. But, nevertheless, the man who relies upon angling as the medium of his communication with the open cannot place too much importance on the quality and suitability of the fishing kit. It is a time-worn and very true sporting axiom that a poor gun makes a poor shot; and shoddy, ill-chosen tackle makes a careless, and consequently a disappointed angler. The sportsman to fully enjoy his trip, to want to go again, must meet with at least moderate success whether his purpose be the taking of game or game fish; and good guns and fine, well-selected tackle go a very long way toward insuring this success.

CHAPTER II

THE FLY-ROD FOR TROUT FISHING

THE Eastern brook trout, except upon rare occasions and in exceptional localities, is not to be taken save through the exercise of considerable skill on the part of the angler. Generally speaking, the factors which make a consistently successful angler, one who usually makes a pretty good showing except when the conditions of wind, weather and water are collectively or severally against him, are knowledge of the habits of the game-fish sought, patience, good fishing tackle, and a thorough knowledge of how to use it. In no form of angling are these things more essential than in fly-fishing for the speckled trout.

The acquirement of the natural history of game-fish, the possession and exercise of care and patience, and the ability to handle tackle skilfully are, more or less, matters of the personal equation, supplemented, in the case of tackle-handling, by intelligent and faithful practice. Good fishing tackle is a matter of dollars and cents, and, naturally, a knowledge of what is good tackle and what is not is necessary in its selection. In

the long run the most successful way of taking trout is fly-fishing for them — when it is done rightly. The outfit for trout fly-fishing is composed of a fairly long list of various items, some of them apparently unimportant but nevertheless by no means to be overlooked. In trout fly-fishing it is the little things that count. Looking over the list of necessaries it is hard to determine just which of the different essential things is most important; but, logically, the fly-rod first calls for consideration.

Qualities of a Good Rod.

It may be stated at the outset that, in the opinion of expert rod makers and rod users, fly-rods of split-bamboo, or split and glued cane as they are sometimes called, are unquestionably the best. This is because the split-bamboo rod possesses in a greater degree than rods of any other material or combination of materials the essential qualities which any rod must have to distinguish it from a mere "fish pole." These qualities are: Lightness, pliancy, resiliency, strength and balance.

In addition to the fact that good sportsmanship demands the use of a light rod, such a rod is in many ways the most desirable. The advantages of lightness in the fly-rod are so obvious that it is hardly necessary to enlarge upon them. Moreover, if you wish a heavy rod you will have to build it yourself or import it from England. Generally speaking, all American rods are light. One advantage of the light rod is the re-

sulting comfort of the user. The angler whose fishing days are few and far between likes to hit the river early in the day and stay with it as long as he can see his flies. It is hard work even with the lightest rods. This subject will be discussed more specifically under the subject of length and weight which will be taken up in a later chapter.

The fly-rod must have the correct degree of pliancy, although the question of how great that degree should be is, in a measure, a matter of taste, some preferring a whippy rod and others one moderately stiff. The rod best adapted to average trout fishing in streams — and it should be said that average stream fishing is always implied herein unless another form is specifically mentioned — should, however, be neither whippy nor stiff. When fishing in strong rapids a whippy rod is a mighty poor tool. It has neither the ability to answer at once to the angler's strike, nor, in case the trout is fortunately hooked, the backbone to handle him properly. In addition to this, a whippy rod is not suited to long casting — not tournament distances but fishing casts — for the simple reason that it will not lift a good length of line from the water. Nor is the stiff rod desirable. On surface indications one would conclude that since, as above stated, a too pliant rod does not cast well, a stiff rod should be a strong caster. Such is not the case however. A rod that is very stiff refuses to aid the angler in casting the line; it does not bend sufficiently, and consequently

the "whip" of the rod, the elastic action that sends the flies out straight and far is lacking. Fly-casting is a matter of the wrist aided by the rod, and if the rod fails to do its part it is obvious that poor casting only can result, and casting that if long continued grows very tiring to the angler. Failing proper rod action, strong-arm casting must be resorted to. It is good exercise, but best avoided if possible.

Remember when testing the rod for pliancy — we will talk later about testing the rod — that a rod which has a tendency toward being whippy will in time develop that characteristic very strongly. The rod which inclines to stiffness, not actual inelasticity, but a good strong suggestion of backbone, is the one you want. It will in a short time with a moderate use, come down to the desired pliancy, and it will stay there. The use of a heavy line will improve the casting of a stiff rod quite measurably. If you find yourself with a rod on your hands that has this objection, use a heavy line and, when you can, cast a long line. The long heavy line tends to produce action in the rod, and in due time, if the rod is not incurable, it may work down to a decent degree of pliancy.

On the other hand a whippy rod can be considerably improved either by additional windings of silk, or by removing the windings from the entire rod and replacing them at closer intervals. It should also be noted that a stiff rod, apart from the objection that with it good casting is impossible, is also undesirable

in that with such a rod it is very difficult to avoid handling the fish too roughly. From the middle to the end of the open season low and clear water is the rule, a condition which the angler meets with small flies and light leaders. With a stiff rod and light terminal tackle quick, sharp striking is more than apt to result in tearing the small hook away from the trout, or, in case the fish is a large one, snapping off the fly.

The rod quality of resiliency is often confused with that of pliancy. The two qualities are, however, quite different, although, in a way, interdependent. As a very rough example of the distinction between pliancy and resiliency it may be said that a piece of copper wire may be bent, thus showing the possession of pliancy, but when the strain is released it will retain the bend. But if you bend a piece of whalebone it will, when released, immediately spring back to its normal condition. Resiliency, then, is the rod's ability always to come back, rebound, to the normal after any reasonable strain. It can only be attained by expert construction and the use of the best material obtainable. The degree in which the rod is endowed with this quality determines the length of its life, for no one likes to use a rod which has lost its speed and liveliness, and has acquired a lifeless and permanent set, although otherwise it may be intact.

That the rod must have strength is sufficiently plain. Balance, the question whether the rod fits you or not, is one of the things to think of when selecting a fly-rod.

It is quite certain that, no matter how good the rod may be otherwise, if it does not suit you, is not adapted to your particular method of casting (every angler develops an individual casting method), if it is a little too heavy in the tip, or possibly a shade too heavy in the butt, or if for any reason the rod does not feel right to you, it is a much better plan to choose another rod than to try to accustom yourself to that particular rod's peculiarities. The chances are that if you try to get used to the rod, someone else will eventually own it, or it will occupy a very permanent place in the rod rack.

The Split-bamboo Rod.

The split-bamboo rod of good grade possesses each of the foregoing essential qualities in a greater degree than rods of any other material. They are usually made of six or eight strips, hexagonal or octagonal, and from two varieties of cane, Calcutta and Tonkin, the merits of which are about equal. Triangular strips are split and fashioned from the whole cane and cemented and bound together to form the rod joint. Mechanical skill of the highest order is necessary, and the fly-rods turned out by our best rod makers are veritable works of art. The best rods are made entirely by hand.

The comparative merits of hexagonal or octagonal rods have been the subject of long discussion, but at present expert opinion is strongly on the side of the six-strip rod. The chief argument against the eight-strip

rod is that in the tip-joint, and proportionately in the other joints, where the separate strips are necessarily slender, the tip of eight strips consists, to exaggerate a little, of about equal parts of glue and wood. That the tip is apt to be soft goes without saying. It is, however, perfectly feasible to have the butt and middle joints of the rod eight-strip, and the tip six-strip, and some rods are made in this way. The best rods of two of the most prominent New York tackle dealers, both for fishing and tournament work, are six-strip. Another well-known firm furnishes its best rod in both the six- and eight-strip styles, with an additional charge of $10 for the eight-strip rod.

Six- or eight-strip?

Variations of the split-bamboo rod as regards construction, taking the hexagonal or octagonal rod as the standard, are not numerous in this country. In England a good many rods are built with steel centers, and some are known as double-built rods. In the steel-center rods there is a core of spring steel wire extending through the entire length of the joints for the purpose of making the rods more springy, stronger and better casters. In the double-built rods a core of either six or eight strips of cane is first made in the usual manner, and then other strips are laid on over these. Double-built rods with steel centers are also made. In this regard it is worthy of note that England's famous exponent of the dry-fly, Mr. F. M.

Variations of the Split-bamboo.

Halford, in his book *The Theory And Practice of Dry-Fly Fishing,* declares very strongly in favor of the split-bamboo of regular construction.

Without going into the subject further, it may be said that while the double-built, the steel-centered and the eight-strip rods are undoubtedly efficient, their advantages over the six-strip rod are more theoretical than practical. The angler may rest assured that if he selects a good six-strip rod he has as good as there is.

Another method of split-bamboo rod construction, which is applied to solid wood rods as well, consists of spirally winding the entire rod with fine metal threads. The metal-whipped rods, either of split-bamboo or solid wood, are good rods. Personally, I have never used the metal-whipped rod, but I know several very expert fly-fishermen who swear by them. Metal-whipped rods are also made in England.

Bear in mind that only the split-bamboo rod of good quality deserves the unreserved recommendation above other rods which is here and universally given it. Only in the best split-bamboo rods is there that unity of good material and conscientious workmanship which insures to the angler a satisfactory tool. Cheap split-bamboos are abominations, and the source of unending trouble to the man who attempts to use them. Also, it is quite possible to make a split-bamboo rod which, to the eye of the novice, appears all that it should be; in fact, it may even look better to the novice than an unpretentious rod of the very highest quality to pro-

duce which the maximum of skilled hand-labor has been called upon and the minimum of barber-post windings and fancy trimmings. *Caveat emptor* should be the maxim of every man who barters for a fly-rod. What to pay for a rod will be discussed in a subsequent chapter.

Other Rod Materials.

Rods for trout fly-fishing are also made of the solid woods bethabara, greenheart and lancewood, and of steel. The steel rods, very good rods for certain purposes, are most emphatically of no use in fly-casting. The action of the rods is very harsh, while at the same time they are lacking in the elastic whip that puts out the flies lightly and far. Moreover, they are heavy. One way to describe the inherent unfitness of the steel rod for fly-casting is to say that it is too metallic. The "gentle turn of the wrist" used in striking the small trout of our mountain streams, no matter how carefully done, with a steel rod results in a brutal snap that many times tears the hook away from the fish. On no account get a steel rod for fly-fishing. They are very good and handy rods for certain purposes and their proper uses will be mentioned later.

Of the solid wood rods, bethabara, greenheart and lancewood, it may be said that rods well made from any of these materials are good rods, although they suffer in comparison with the split-bamboo. Not every man, however, can afford the latter. It is an axiom that it is much better to pay a certain price for a solid

The deep holes are the trout's favorite lurking-places

wood rod, thereby getting the best quality rod of that particular material, than to pay the same price for a split-bamboo which for the same amount can only be obtained in a poor grade. The fact that solid wood rods of the best quality, and in other grades in proportion, are much cheaper than the split-bamboo rods, does not by any means imply that they are essentially "cheap" rods. The making of a split-bamboo rod, requiring as it does for the best rods careful selection of material and the very highest skill in the maker, very naturally results in a comparatively high price. Rods of solid wood are by their very nature easier rods to make, and in most cases satisfactory material is easier to obtain. Rods of any of these materials are heavier for any given length than the split-bamboo rods.

Of the solid wood rods lancewood rods are the most common. This material is not quite the equal of greenheart. Bethabara is the best. In England, where heavier fly-rods are commonly used, greenheart is the most general rod material, taking precedence over split-bamboo. Bethabara is an excellent material, rods made from it being very handsome, and having in a satisfactory degree the essential rod qualities. The wood is of dark color and takes on a fine natural finish. Selected bethabara is sometimes called noibwood. Bethabara rods are not very common in the tackle shops although many rods are made from this material by amateurs. Lancewood is the most easily obtainable rod material and has over greenheart and

bethabara the advantage of lightness, although not in a very decided degree. Lancewood rods are apt to be too whippy and rather slow in action. It should be remembered that I am now speaking of fly-rods purely. For some purposes the solid wood rods are preferable to split-bamboo.

CHAPTER III

FITTINGS FOR THE FLY-ROD

WHEN you have decided upon the material for your rod there remain a number of mechanical details of construction, in addition to various questions of length, weight and the like, to be considered. We will take it for granted that you have decided to get a fly-rod of six-strip split-bamboo. A visit to the tackle shop or the consultation of the tackle catalogue of a large dealer will show you that you have still to decide about the number of rod joints; style of ferrules and hand-grasp; form of handle or butt, whether integral or independent; the form of guides and windings; and the style of reel-seat. We will first take up these latter details and then consider the matter of length and weight of the rod.

Number of Rod Joints.

Fly-rods are usually made with three joints, the butt, middle joint and tip or, as the last is called in England, the top. There are, however, variations of construction in this regard. For obvious reasons the one-piece rod, that is a rod with spliced joints, is the ideal rod; but

fly-rods of one piece are not commonly procurable. Such a rod has, of course, the very great disadvantage of being difficult to transport. The next form is the two-piece rod which also has obvious disadvantages and is not common. The standard fly-rod, as we have said, is made in three joints, an extra tip being always furnished with the rod; and for ordinary purposes this is by far the most desirable form. For the angler who makes long trips on which the duffle must be reduced to a minimum various kinds of combination, tourist and trunk rods are made.

Of the combination rods it may be said that any rod constructed with a view to fulfilling several purposes cannot by its very nature be exactly suited to any one of these purposes. It is far better, if at all practicable, to pack two rods, one for fly-fishing and another for bait-casting or other fishing, than to attempt to do the work with a combination rod. It is obvious that a rod expertly made with a view to one use only is better than one modified in various ways so that by different combinations it can be used for several purposes. However, in case such a rod is by way of being a necessity, it is possible to get some very fine ones so far as material and workmanship are concerned. But do not use one unless you have to for some good reason.

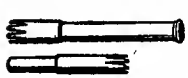
The tourist fly-rods are of the greatest utility. These rods are not combination in character but consist of several interchangeable joints with a view to

meeting the contingencies of a long, hard trip in the woods. Very few rods in expert hands are broken on fish; but on the portage, or in the boat or canoe, or while tearing your way through thick brush, the chances of a smash-up are numerous. For this reason no one should start on a trip of this character without, at the very least, one extra rod. But, while fly-rods are very light, a bundle of two or three, or the same number carried in a leather rod case, makes a very unhandy package. The tourist rods are made for the purpose of doing away with this difficulty. The independent handle, which we will discuss later, is a regular part of the tourist fly-rod, and otherwise the rod consists of two butt-joints, two middle-joints and three tips. The independent handle is carried separately, and the joints are packed in a case of small caliber, making a much more portable package than a number of individual rods.

In the trunk or pack rods the idea of portability is carried to the extreme. Rods consisting of as many as nine or more short joints are made, the usual number being six. It is obvious that the number of ferrules necessary in such a rod must materially affect its action, the tendency being to make the rod too stiff. These rods, also, run rather short, eight and a half or nine feet being the limit. Only in the very best grades are such rods at all satisfactory; and if extreme portability is no object it is much better to let the other fellow use them.

German silver is the usual ferrule material on all rods of good grade and is perfectly suited to the purpose. It should be remembered, however, that German silver is not all of one quality, and the mere fact that the ferrules are of "German silver" does not guarantee them unless the material and workmanship are right. The best German silver ferrules are hand-wrought and approach steel in hardness. On the cheaper grade rods nickel-plated ferrules are used, and on some rods plain brass ferrules. Both of these should be avoided. To the novice a ferrule is a ferrule, and that is the end of it; the old-timer, however, knows that there are certain qualities which the ferrule must have in order to be entirely satisfactory. In the first place the ferrules should be "waterproof" in order to prevent rotting of the rod material at their bases. In the waterproof ferrules a metal disc is placed across the inside of the ferrule next to the wood of the joint, thus making it impossible for water to reach the wood.

Ferrules.



SERRATED FERRULES.

Also, the ferrule should be "serrated" or "split." This means that the end of the ferrule which is secured to the rod joint is, in the case of serration, cut into saw-teeth or crown-shaped; or, in case the ferrule is split, that the base of the ferrule is cut or split in several places. Both of these processes are for the purpose of making the ferrule easier to bind hard and fast to the rod joint,

the serration or splitting making it possible for the cement and silk winding to bind the ferrule much more securely than in the case of ferrules with plain bases.

Next, the open end of the female ferrule should be "welted"; that is, the end is strengthened with an extra band or welt of metal. And, finally, the ferrule should be "capped," meaning that at the binding end of the ferrule it is "shouldered" to cause more perfect contact of rod joint and ferrule and to prevent the ferrule from slipping. To sum up, the ferrules of the new rod should be waterproof, capped, serrated and welted. And the material should certainly be German silver.

In England various methods are resorted to for the purpose of making the rod stronger at the ferrules. Rods are made which have to be spliced in order to assemble them — doing away with ferrules entirely — and in other cases the ferrules are fitted with metal hitches so that they may be locked or lashed together when the rod is assembled. These methods are employed, as I have said, for the purpose of making the rod stronger, and also to prevent throwing apart in casting. It is, perhaps, needless to advise against the use of anything of the sort, for the simple reason that you cannot find any American rod having this feature. Those who are in a position to know, state that these methods are employed in England because there ferrules approaching to anything like the excellence of

those produced in America are not to be found. If your rod is fitted with good grade, American made ferrules you need not worry about its strength; and, moreover, if you throw it apart in casting, consider it a miracle and let it go at that. It will not happen again.

Doweled ferrules, formerly the subject of much discussion, are things of the past and not to be found on the best fly-rods of the present time. The fact that they are no longer used is the best argument against them, and we will not go into ancient history.

Many anglers object to the brightness of German silver ferrules, claiming that the flash of the metal in the sun alarms the fish. Undoubtedly this is true to a certain extent, but its importance is often exaggerated. The angler who wishes to may have the ferrules oxidized to his order. Ferrules of German silver will, in time, tarnish to a certain extent, dulling considerably. This tarnish can easily be removed, but it is a good plan to let it remain thus doing away with any extreme flashiness of the ferrules.

The Handgrasp.

The chief consideration in regard to the handgrasp is the material. Handgrasps are commonly made of plain wood, celluloid, wood cord-wound, hard rubber, wood cane-wound, cork and "solid cork." All of these materials, with the exception of solid cork, make fairly good grips; solid cork makes the finest possible grip. The rod-buyer should bear in mind that the handgrasp

catalogued and sold simply as cork is nothing more than a thin sheathing of cork, or a composition resembling the same, glued over a wooden form. It is the worst and most unserviceable of all handgrasps. Solid cork grips are always so described, and consist of

SWELLED HANDGRASP OF FLY-ROD.

a number of thick, graduated cork "washers" closely fitted and glued over a core of wood, making a light, strong grip, one that feels good to the rod hand and affords an easy and firm hold. And it will last. Handgrasps of the other materials, especially the celluloid grasp which is generally corrugated, are more or less hard on the rod hand in long continued casting. Next in order to the solid cork grasp the cane-wound is most satisfactory.

The handgrasp for the fly-rod is made in two gen-

SHAPED HANDGRASP OF FLY-ROD.

erally accepted forms as regards the shape. These are the "swelled" grasp and the "shaped" grasp. The swelled grip is largest in circumference at the middle and gradually tapers toward the ends. The shaped grasp tapers from the middle but enlarges again at each end. Either is perfectly satisfactory and whether

you should use one or the other is merely a matter of taste. The swelled grip is the most commonly used and is the one generally furnished on rods good, bad and indifferent. As a rule the shaped grip is found only on the high grade rods with independent handle.

The Rod Handle.

The handle of the fly-rod consists principally of the grip and reel-seat, other parts being the butt-cap, or the metal cap at the bottom of the handle — in English rods this is usually a hard rubber button — and the "taper" which binds the top of the grip material at the junction of the handle and the butt-joint. We have considered the grip, and the reel seat will be mentioned later. The only thing, then, to decide about the handle is whether it is to be integral or independent; that is, whether the handle shall be a permanent part of the butt-joint, or a separate length provided with a ferrule into which the butt-joint fits. The independent handle is advocated on the ground of the greater portability and longer life of the rod. Its advantages are best described by H. P. Wells in *Fly-Rods And Fly-Tackle.* He says: "Insist on the independent handle. By independent handle is meant one so united to the butt-joint by a ferrule that the rod may be turned half-way around in the handle and back again at frequent intervals while fishing — say every half hour anyway and always immediately after the rod had been subjected to a heavy strain. Thus the rod is used with the rings above and below in

frequent alternation, the strains to which the rod is subject offset and neutralize one another, and the rod will retain throughout its life that perfect identity of action on both the forward and back casts, the lack of which, in my judgment, is one of the very worst faults a fly-rod can have."

As above noted the independent handle is used on the tourist fly-rods and makes it possible for the angler to carry the equivalent of three individual rods in a very small package. For mountain stream fishing, where the fish are not large and the fishing trips short ones, the rod has usually abundant time to "get rested" and the independent handle is hardly imperative. It increases the rod lengths by one and the ferrules by two, neither of which things is greatly desirable for a good many reasons.

The Reel-seat.

It is hardly necessary to state that for the fly-rod the reel-seat must be placed below the handgrasp. In common with all other metal rod-fittings, the material should be German silver. If the rod is to be used for heavy fishing some form of locking reel-seat, of which there are several kinds, might be advisable. For ordinary purposes nothing of the sort is necessary. These devices are for the purpose of firmly locking reel to reel-seat as a guard against any possibility of the reel working loose while casting or playing a fish. Some fly-rods are furnished with reel-bands only. This form is not as serviceable as the ordinary metal

reel-seat. Its only advantage is that it makes the rod a little lighter.

The guides ordinarily used on fly-rods are of two kinds, rings-and-keepers, and English snake guides.

Guides.

Of the two, snake guides are very much the best. Not only does the line render more freely through them but they are much stronger and less liable to become bent than the ring guides; and they facilitate "stringing up" the rod very materially. Snake guides of German silver are rather soft and the continued action of the line through them soon produces grooves. This is particularly the case with the hand-guide—the guide next the reel—and the top guide. For this reason steel guides are the better. As an aid to casting and for the purpose of saving line-wear it is a good plan to have the rod fitted with an agate hand-guide and agate top. If the rod is thus fitted German silver will do for the rest of the guides. Agates cost from $0.75 to $1.00 each.

1. 2.

1. Ordinary Tip-guide.
2. Agate Tip-guide.

1.

2.

1. Ring- and-Keeper Guide.

2. English Snake Guide.

Narrow Agate Guide.

The rod should be wound at intervals of not more than an inch and a half at any part, and much closer than that toward the tip-end. Windings of some shade of red are very satis-

factory, as this color is less liable to fade badly than some others. A very pale green is also a good color. Plain windings are to be preferred to two-color windings since they are easier to renew. Rods are made "solid-wound," that is, the entire rod is wound with silk; they are not, however, a success, being too soft. Avoid any freak or fancy windings. The very best fly-rods are "as plain as an old shoe."

Windings.

Recapitulation.

Aside from the question of weight and length the rod specifications should be about as follows:

Material: *Six-strip split-bamboo.*

Number of joints: *Three. Optional, but not advised except for extraordinary occasions — the tourist rod, the trunk rod, the combination rod.*

Ferrules: *German silver; waterproof; capped; serrated; welted.*

Handgrasp: *Solid cork. Next best, cane-wound.*

Reel-seat: *German silver; below grip.*

Guides: *Snake guides preferably of steel, otherwise German silver. Optional, agate hand- and top-guides.*

Windings: *Plain red or green silk.*

CHAPTER IV

CHOICE AND USE OF THE FLY-ROD

THE manner in which the rod should be fitted, or mounted, being determined, we have next to consider its length and weight. These questions are largely ones of locality and the average size of trout in the waters to be fished. In this matter, however, anglers are quite apt to be extremists, some favoring very light rods and others rods rather heavy. We will take it for granted that, at present, you do not care to buy more than one rod, since, if the rod is a good one, it will cost quite a bit; and, with this in mind, we will try to choose the best weight and length of rod for practically all-round trout fly-fishing. You cannot be too careful in this regard; for, no matter how satisfactory the rod may otherwise be, if you take a dislike to its weight or length, or if actual use of the rod proves that it is unsuitable to your favorite trout stream, you are at once in the market for a new rod. Without doubt there is a certain pleasure in picking up new tackle; but beyond a fixed point — which may be designated in dollars and cents — the pleasure ceases abruptly. Every man will have his

own idea as to a reasonable limitation of his investment in tackle, but it is a matter that all of us are bound to keep in mind.

In the tackle stores you will find rods running from 8 to 11½ feet. In weight they vary from, as a rule, 3¼ to 9¼ ounces. These rods are in split-bamboo. It is quite evident that here is a large variety from which to select, and that if your rod is to prove the right one, your selection must be the result of very judicious elimination. Solid wood rods average heavier to the foot, and since, for fly-casting, they are not the equals of the split-bamboo, we will not complicate matters by including them. The first thing to do is to pass over any rod exceeding ten feet, that is for actual trout fishing. These rods are concessions to the English trade and for the long-distance tournament fly-casters. Although it is possible to imagine circumstances under which one could use a rod of this sort to advantage on some particular occasion, for ordinary use it is quite out of the question. The choice of the rod should be made not only with regard to giving the fish a show, but also with due regard to the comfort of the angler. By way of experiment the writer once put in a day's fishing with an 11½ foot rod. This was on a stream that could truly be called typical of our American trout waters. Morally the experiment was costly. By sunset the rod had attained a length of, approximately, one mile, and a duly proportionate weight. When going through

Length and Weight of Rod.

brush its action was beautifully precise; it never failed to catch. However, the necessity of enlarging upon this is probably not imperative. It is enough to say that the lesson was learned thoroughly and has never been forgotten.

Going to the other extreme, the very light rods are entitled to more serious consideration. That they are fine little rods to handle goes without saying. Also, if the mere size of the trout that you are likely to take on one of them were the only question, they are plenty large enough. Skilfully handled, they are capable of landing your record trout "without turning a hair." But, unfortunately, there are other things to be considered. Not one trout in a hundred, in stream fishing, is hooked where the angler can let him have his head. Sharp rocks, sunken logs, projecting tree-roots and the like are familiar features of all our trout streams, and most often the fish must be held hard and killed quickly. The larger rods are better adapted for this.

And here is a thing that must be reckoned with. Some years ago tales of large trout in near-home waters were more or less not so. At the present time, however, through the very extensive propagation and distribution of brown and rainbow trout, the angler is liable to be called upon at very short notice to have it out with a trout weighing anywhere from two to four pounds, and quite possibly more than that. A fish of this size, in the average confined and brush-

grown pools of our mountain streams, is a pretty hard proposition. You do not have to worry about giving him a show — he takes it, and sometimes the leader and the flies.

And then there is the fishing in strong rapids, a component part of every day's fishing on any sizable stream. Here you have not only your fish to fight but the impetuous, erratic strength of the current. That the trout will take every advantage afforded by such conditions is a foregone conclusion. Unless your tackle is suited to hard work, and, as far as possible, of such nature as to give reasonable control over the trout, the result of the engagement is also a foregone conclusion, or, at best, a matter of more time than should be the case. It is not a matter of rod weight alone. Length, inasmuch as it is this which determines in great measure the amount of control which you have over a hooked fish, is also a deciding factor and a decided advantage.

The little rods easily lengthen out a line quite sufficient for ordinary trout waters — under favorable circumstances. We hear much about the most favorable times and conditions for fishing. How many of us wait for these exact and infallible conditions to materialize? We go fishing when we can, and if the weather, water and the like are not precisely such as the authorities state as requisite, we quite often catch a few trout, and, anyway, we have a good time. Anyone who has cast all day against a strong, steady wind,

knows how hard it is to do good work even with a moderately heavy and long rod. And when, for hours, you have cast in a drizzling rain, until the line in spite of its waterproofing seems to have soaked up gallons of water, and the rod, seemingly, has been reduced to lifeless pulp — then you realize how difficult it is to cast "fine and far off" sometimes, even without the handicap of a small, light rod. These things should have weight in the process of elimination.

We have now, to our own satisfaction, at least, reduced the choice of a rod to the lengths between nine and ten feet inclusive. The weights of these rods vary from five to six ounces, in some cases with accompanying fractions. Any of these rods are good, everyday "meat" rods, and if proper allowance for the character of your favorite stream be made in the choice, will answer all requirements.

As a final word on the subject of length and weight, it may be said that the fly-rod of ten feet and weighing six ounces is by far the most capable and satisfactory rod for all waters except very small mountain brooks. If only one rod is to be purchased, the ten-footer is strongly advised.

The all-round Fly-rod.

Do not buy a rod from anyone or any firm unless from a reputable rod maker or from one of the concerns which make a business of fishing tackle and, therefore, cannot afford to sell poor stuff for good.

Where to get the Rod.

You can get a rod (?) at the department store; from a rod maker; from one of the big firms dealing in tackle exclusively; or from one of the general "sporting goods" houses. At any of these places, except the first, you can get a good rod if you go about it rightly. It is advisable, however, to purchase the rod either from a professional rod maker or from one of the regular tackle firms.

Anyone who has attempted to sift out the very best shotgun from the numerous shooting-irons on the market knows that each firm in the gun business sells the only really good gun; and it's the same way with fishing rods. Each of the reliable firms solemnly assures you that its rod is the only real fly-rod — all others are merely "poles." Of course this is not so, and no one knows it better than the tackle people themselves. While it is quite true that for tournament casting only one or two firms supply a satisfactory rod, for actual fishing it is possible to get a rod that, perhaps, is entirely too good for you, at any of the best places. Reference to the advertising pages of the better class of outdoor magazines will give you the addresses of the best tackle dealers and tackle makers. A careful and comparative study of the catalogues of these firms cannot fail to be of advantage.

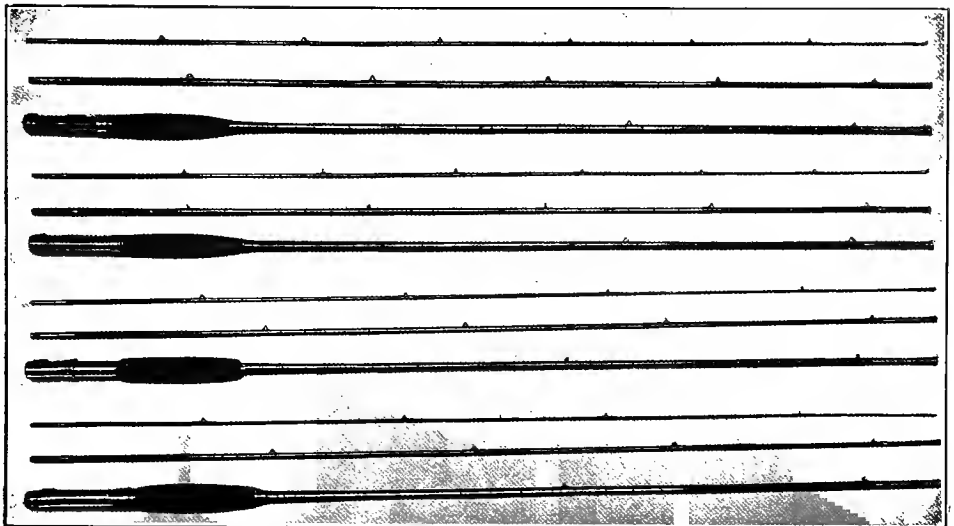
If the circumstances are such that you have to buy your rod by mail, it is well to have two rods of the dimensions you require sent you, with privilege of examination, and you can return the one which seems

least satisfactory. It is impossible to make two rods of identical action and balance although the rod measurements and mountings may be the same. Buying a rod by catalogue is, in many respects, a lottery. The angler should know perfectly what he wants before going ahead. If at all possible it is much better to go to the tackle store and select the rod in person.

The Cost.

Six-strip split-bamboo fly-rods may be had for seventy-five cents. They may also be procured for, say forty-five dollars. The question is: How much must you pay for a really good rod; a rod that will last a long time with moderately hard use; will have a good appearance so that you can show it to people without apologizing; will have good casting and retrieving power together with perfect action and balance; and, finally, will handle efficiently a weighty trout in a tight place? Obviously the answer is not seventy-five cents — nor is it five dollars.

For from $15 to $20 you can get a real fly-rod if you go about it with discrimination; and you cannot do it for anything less than that, or if you fail to use discrimination. Remember, in this connection, what was said in the chapter on split-bamboo rod construction concerning the manual skill and costly selection of material required to produce a rod of good quality. The average price of the best rods made by reputable rod makers is $15; and they are good enough fishing rods for anyone. Variations from the standard rod will



Four representative split bamboo fly rods. The rod at the bottom is a regular "machine-made" five-dollar rod with nickel-plated brass mountings. The next above, also "machine-made," which means carelessly, is of better material and construction, and has German-silver mountings. Price, $10. The third rod is "hand-made," and is worth every cent of the price, $18. The fourth, or top rod, is strictly high grade "hand-made" from the best selected and seasoned material. Price, $30. All are six-strip split bamboo, length 9½ feet, and weight from 5½ to 6 ounces.

usually bring the price up to $17 or $18. The large tackle firms of New York, Boston and other cities furnish two classes of rods in addition to their cheap stuff. The best rod sold by them usually costs about $30; and a "medium price" rod is carried which sells for something between $15 and $20. There is a vast difference in the style and quality of these medium priced rods. While they are all of them pretty fair rods some of them are very much better than others. Select the rod carefully. Compare the different rods as regards their dimensions and mountings, their weights, etc. Within the last few years a fly-rod has been developed which differs considerably, when a number of small variations from the rod of a few years ago are added together, from what may be called the "old-fashioned" rod. The new rod may, perhaps, best be described, as being of "tournament style." And that is the sort of rod you want.

And now as to the unquestionably high grade split-bamboo rods. These rods may be had for from $25 to $45, in the three-joint-extra-tip style, with an average price of $30. Do not think they are not worth it. While for various reasons it is not advisable for one to spend that amount for a beginner's rod, it is certain that the fairly well advanced angler who can afford it should not hesitate to avail himself of the many undoubted advantages they offer. Although the variation in desirability of these rods is not, for general purposes, as large as in the case of those of medium

price, it is well to look around a little before committing yourself.

The best rods of lancewood, greenheart and other solid woods may be had for from $8 to $12. Any of these rods is much better than a split-bamboo at the same price, and will give the angler long and faithful service, although they are not, as we have said, as well adapted to fly-casting as the good quality split-bamboo. The noibwood fly-rod sells for $15.

Testing the Rod.

The best test of a fly-rod is ten years' hard work on a trout stream; but, since your tackle dealer would probably be somewhat reluctant about having the rod returned as not up to scratch at the end of that period, it is necessary to test it in some other way. If you have ever seen a rank novice selecting a rod you should know, at any rate, how not to test the rod. He takes hold of the extreme butt-end of the handgrasp, gingerly, and, in the most perfectly lady-like manner, as if the rod were made of glass, gently wafts it to and fro through the sporting atmosphere of the tackle shop, failing utterly to put the slightest snap, bend or action into it. And if the variegated tints of the windings happen to suit his artistic fancy, why, he just simply buys. It's nice for the tackle man.

Do not be afraid of the rod — it will not bite you, nor will it break — but grasp it firmly, with the thumb on top and along the handgrasp as in actual casting, and put the rod to work, into action. It should bend

right from the handgrasp to the tip-end. Make sure that the balance and weight suit you, and that the rod feels full of life and speed. When testing the rod for balance, weight and action it should be rigged with the size and sort of reel you intend to use with it, as this may make a very great difference in the feel of the rod. Be sure that the rod does not feel heavy out-of-hand, for if it does it is top-heavy; while top-heavy rods are sometimes very strong casters they are unpleasant and very tiring rods to use. One of the tests of the good shotgun or rifle is the absolute exactness of fit or jointure of every part. This must also be required of the fly-rod. See that every part fits every adjacent part with nicety, especially with regard to the joints of the strips of cane. In cheap rods you will find places where the strips of cane lie open like gaps in the planking of a leaky skiff.

If you hold the rod straight out in front of you, you will notice that it bends down slightly — if the bend is more than slight, discard the rod, it is too whippy — and the bend should be graceful and even. Still holding the rod in this manner, rotate the rod on its axis, and during the entire period of rotation see that the bend or "dip" remains constant. If at some time during the rotation the point of the tip moves upward, it denotes a sufficient fault of construction or material to warrant setting the rod aside. If the rod successfully passes the tests suggested, then fit it with a suitable reel and line, reeving the line through

the guides as for fishing. Reel off a convenient length of line and attach the end of it to some substantial object or have someone hold it. Then, steadily, put a good stiff strain on the rod and carefully examine the bend. As said above the rod should bend evenly throughout its entire length from handgrasp to tip-end; the bend should not be entirely confined to the middle-joint and tip as is often the case. An even, graceful bend spells equal distribution of strength, and equally distributed strength means long life to the rod. Put this strain on the rod with the guides both above and below the rod, and also with the sides of the rod held upward. The pull of a hooked fish and the strain upon the rod when casting are by no means from one direction only, and the rod must be capable of sustaining with equal resilience and safety, strains coming from any direction. After each of these tests for equality of bend see that the rod returns readily and at once to its normal straightness. If it does not, but seems to have a slight "set," or to come back in a lifeless manner, it lacks resiliency and backbone and on no account should be accepted. Finally, if the circumstances are such that it is possible, do some actual casting with the rod.

Use and Care of Rod.

As a general axiom it may be said that split-bamboo rods require considerably more care than those of solid wood; and since, for fly-casting, your rod will preferably be of split-bamboo, you must be

prepared to take good care of it. By all means learn how to wind a rod so that frayed or loosened guide or ferrule windings may be replaced at once without waiting for a rod maker or anyone else to do it for you. Any experienced angler will gladly show you the trick, or you can pick it up from one of the tackle books, such as Mr. Wells' *Fly-Rods And Fly-Tackle* before referred to. Wipe the rod dry after fishing and before putting it away in the rod case.

The handiest single rod case is one of canvas, partitioned, with a small, cylindrical, metal or wood tip-case. For carrying two or more rods a leather rod case may be used. The cost varies with the size. One of ordinary size and of stiffened leather, costs about $4; of sole leather $12. They are heavy, unwieldy affairs, and, if possible, it is better not to use one. However, for shipping rods by express, and on very hard trips where several rods are carried (in this connection see the "tourist" fly-rod) they are indispensable.

If you keep the rod in a wooden form never tie the strings or buckle the straps too tightly, as this results in warping the joints. For the same reason never lean the rod either jointed or taken-down against anything.

Do not allow the rod to lie on the ground. Dampness, and fragility of rod when in contact with large, hobnailed wading boots are the reasons. Dampness will very quickly ruin the very best of fly-rods.

Work toward the butt when assembling the rod. First assemble the tip and middle-joint; the butt-joint comes last. Take the rod down just reverse, starting with the butt-joint. Do not, as you value the long life of your rod, twist the ferrules either in assembling or taking down the rod. When assembling the rod in a boat or canoe reeve the line through the guides before putting the joints together.

When going through brush with the rod rigged for fishing carry the rod in front — do not drag it behind you — and go slowly. If there is any considerable amount of brush-going to traverse take the rod down. You will save time and other things.

Learn to splice a rod at the stream-side — and then see to it that you never have to use the knowledge.

In taking leave of the subject of the trout fly-rod the writer wishes once more to say: Get a good rod.

Good Tackle.

You will find that the use of good tackle makes all the difference in the world. You will acquire a different angling view-point, one not wholly concerned with the weight or number of the fish you catch. And there's something about a first-class rod that makes you want to learn how to handle it in a first-class way — and that is a pretty interesting game, and one not too easily mastered. Of no class of goods is it more true that the best is, in the end, the cheapest, than of fishing tackle; and, absolutely apart from its actual use, there is a very certain satisfaction in the mere ownership of

rods and other tackle which you know are beyond criticism. That trout and other game fishes may be taken on cheap tackle is quite true. It is also true that good tackle, for its own sake, is assuredly worth while.

Fly-casting.

The use of the rod in casting can best be learned at the stream-side as distinguished from the library. Any old hand can very quickly show you how much you know in regard to this — that is, if you are willing to learn. But be careful about choosing your tutor. Not every man who wears a halo of gaudy trout flies on his hat-band is a fly-fisherman; in fact, very few of them are. Pretty nearly every man who ever caught a trout "knows all about fly-fishing" but, strangely enough, prefers to use bait; or, quite possibly, in fact rather more possibly, uses bait and, for exclusively conversational purposes, prefers to use flies. Needless to say, this sort of fly-fisherman will not make a very profitable or efficient coach. In a way it is a simple matter, casting a fly; but it's one of the things which are well worth while doing "right"— and that is not so simple.

In default of personal coaching, however, the following suggestions concerning how to cast with the fly-rod may be of advantage. Fly-casting is a matter of two motions, the back cast and the forward cast. It is also a matter of the wrist — not a straight-arm shoulder-swing — and that brings us to the first essential advice. The proper way to hold the rod is to

have the thumb extended along the upper surface of the handgrasp and not bent around it. If you hold the rod in this way it will help getting your wrist into the cast. Another thing, mentioned later, also, in connection with the single-action reel: Have the reel on the under side of the rod (and keep it there) with the handle to the right.

To make the back cast, using to start your practice about fifteen feet of line, the rod is swung smartly backward, overhead, to a position just a little beyond the perpendicular. The line must be thrown well up into the air so that it will not strike the ground or water behind the caster. To make sure of this the rod must never be allowed to go very far back. If, as advised, you stop the rod when it is slightly beyond the perpendicular the momentum of the back-swing and bend of the rod will carry it to the right position. A high back cast is essential to good fly-casting. Keep your elbow low and not too far from the body — not so close as to cramp the arm and make the motion awkward — and try to make the rod do the work. That is what a fly-rod is for. The rod will do the work if you get sufficient bend, or action, into it. It will not do the work if you cast at arm's length. To get rod action you must use your wrist.

Start the forward cast when the line first appreciably begins to pull on the rod from the rear, and bring the rod forward and down to a position a little above

parallel with the water. The back cast should be started rather forcefully; the forward cast should start easily and finish strongly. When fishing do not delay the back cast too long — until the flies are at your feet. At first no attempt to gain distance should be made. Reasonable distance comes naturally with increased skill in casting without special effort in that direction. Accuracy, rather, is the practical fishing essential; and try to lay down a light fly.

As soon as possible learn to handle the line in the left hand; the longer you delay this the harder it is to learn. This method is employed by the majority of experienced fly-fishermen and has numerous advantages. Briefly, the line should be held in the left hand, grasping it between the reel and first guide, thus controlling at all times the rendition and recovery of the line. There should always be a little slack line off the reel for the left hand to work on. When you have progressed with your casting you will learn to shoot out this slack line through the rod guides at the finish of the forward cast, thus adding a number of feet to the cast. Also it is possible to play a trout in this two-handed manner with much more finesse than from the reel. The left hand feels, even anticipates, every movement of the fish, and the trout is never too roughly handled.

The cast here described is the overhead. There are other advantageous fishing casts such as the side

or underhanded cast, the backhanded cast, the spey cast and others. These are mostly variations of the overhanded cast, fundamentally the same, and descriptions of them may be found elsewhere.

CHAPTER V

REELS, LINES AND LEADERS

THE choice of the reel and line for trout fly-fishing is a matter of no difficulty whatever — of so little difficulty, in fact, that not one angler in twenty uses the proper kind of reel or the right sort of line. All tackle for fly-fishing is highly specialized; and, while it is true that if you know what you want, proper selection is easy, it is equally true that, since a very large part of the immense variety of tackle is wholly unsuited to fly-casting, it is very easy to make mistakes. Fly-casting as it should be done can be done effectively only with the proper tools; and one of these tools is

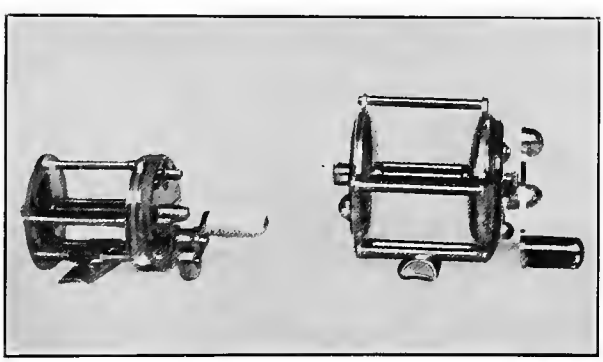
The Single-action Click Reel.

Just why the single-action click reel is the only satisfactory implement for the fly-caster can, as regards its chief claim for precedence, be stated with brevity. It is because the single-action reel does not have an outstanding " balance " handle upon which, continually and with devilish insistence, the line is bound to catch. The stream fly-fisherman who has to contend with the

innumerable natural difficulties of the river — thick brush, slippery rocks, overhanging trees that lie in wait for careless back casts, and numerous other natural impediments — can ill afford to utilize a tool which by its very nature is calculated to increase his troubles; and every form of multiplying reel, since the gearing necessitates an outstanding balance handle, is a first-class trouble-maker for the fly-caster. The very general custom among expert anglers, when fly-fishing, of manipulating the line with the hand not occupied with the rod, grasping the line between the reel and the hand-guide, and thus paying-out and retrieving the line both in casting and playing a trout quite independently of the reel, using the reel only when there is too much slack, renders the reel but little more than a mere line-holder. And even when the reel is used when landing a fish the multiplying machinery is not necessary, indeed, is dangerous, since the tendency is toward handling the trout altogether too strenuously. The single-action reel is fully equal to every trout-fishing emergency.

In addition to its freedom from line-fouling the single-action has also the advantage in weight over the multipliers, as a result of which the light fly-rod balances better. Another argument for the single-action is its simplicity and consequently its lesser tendency to get out of order and greater ability to withstand the sometimes unavoidable hard knocks and abuse which a reel receives in stream fishing. And still another

Single-Action Click Reels
For use in fly-casting for trout and bass



Quadruple-multiplying Casting Reels

favorable thing is the price. A very fine single-action reel can be procured for a third of what a multiplier of equal grade would cost. So, for trout fishing, the selection of the reel is not a question of what sort of reel but, rather, what sort of single-action click reel should be chosen.

How the Reel is Made.

In construction the single-action reel is simplicity itself, and the variation in different makes of reels of this sort is slight and not worthy of comment. Briefly, the reel consists of the spool which revolves within the side plates, the motive power being supplied by the handle which is attached to one end of the spool shaft; at the other end of the spool shaft is a small cog-wheel, or spur-wheel, which connects with a small wedge-shaped piece of metal, the "pawl," the latter being affixed to the side-plate and working on a pivot within a circular steel wire spring. The pawl and pawl-spring in connection with the spur-wheel supply the entire click mechanism. The click should be strong, and the "song of the reel" fine and clear, with a metallic ring which denotes good material — well-tempered steel. See that the spool is narrow so that, when reeling in, the line will build up on the reel rapidly, thus making the retrieve faster.

Protecting Band.

The reel should be made with an ample "protecting band" around the edge of the side plate on the handle side of the reel, within which band the reel handle revolves.

It is the protecting band which makes the single-action reel practically free from line-fouling — the important thing. If the protecting band has sufficient projection it makes little difference whether the reel handle is "balanced" or not; that is, whether the handle is full-sized, extending quite across the side plate and with a weight or balance at the extremity, the most common American construction, or simply a short crank without extension or balance. Personally, I think the balance handle gives the reel a more finished appearance and a slightly better action. Another form of single-action reel construction, known as the English style, does away with both protecting band and reel handle proper. In this form of reel a disk revolving within the side plate is attached directly to the reel shaft, and the reel handle is simply a small knob, preferably slightly tapered outward, fixed to the disk. In a good many ways this is the best sort of reel for fly-fishing.

Materials.

As regards materials, reels may be had of nickeled brass, German silver, hard rubber, hard rubber and nickel in combination, hard rubber and German silver, and, also, of aluminum. Choose either a reel of entire German silver or one of hard rubber with protecting band, spool and handle of German silver. Nickeled reels do not give continued satisfaction, since the plating wears off and the reel takes on a generally tough appearance. Reels of hard rubber only, with no metal bands about the side plates, are very light and good reels, but they are cer-

tainly not to be recommended because of their great liability to breakage. It is simply a matter of dropping the rod-butt on a rock — and getting a new reel. Aluminum reels are not to be recommended for the same reason; the metal is apt to be too soft. A reel of solid German silver is rather an expensive tool, but reels of this sort are very fine ones. The metal is hard, long-lasting and clean and these reels are very serviceable. The reel of hard rubber, with German silver bands and handle, and spool of the same material or aluminum, is, on the whole, the reel which can most unreservedly be advised. The cost is not excessive; the reel looks well and wears well; it is strong enough to stand hard usage; it is light, and, in the various sizes, can be procured to balance nicely fly-rods of any length and weight.

If economy is an object it may be said that the reel of hard rubber, with nickeled bands and handle, is the best. In a good many instances the mechanism of these reels is of the same good quality as that furnished in rubber and German silver. In some cases the reels are, in fact, the same; the only difference being in the German silver and nickel; this, of course, as regards the product of any one manufacturer and the best rubber and nickel reel of that manufacturer. In the makeup of these reels there is enough rubber to partly take away the curse of the nickel, and it is a good plan to have one of these reels along if only for a "reserve." When outfitting for an extended fish-

ing trip be sure that a reserve reel is in the kit. If your reel is broken or lost, either of which things can easily happen in the woods, the extra one will come in rather handy.

Size of Reel.

Do not make the mistake of getting a reel that is too small. It is advisable to get as much retrieving speed as possible out of the reel, and this can best be done by, first, having the reel spool narrow, and, second, having the reel of sufficient size so that you can wind on a core of linen or other cheap line which builds up on the reel to such an extent that, when the casting line (spliced to the linen line) is reached, the barrel of the reel will be large enough to take up considerable line at each revolution. Either the 100-yard size or the 80-yard size will be right — nothing smaller. The 100-yard reel holds about 40 yards of size E enameled line; the 80-yard reel about 35 yards. You see that when the expression "80-yard reel" is applied to the single-action it does not mean exactly that. Ordinarily you will probably not use over 25 yards of level line, either E or F. But if, sometime, you desired to use say 40 yards of line, and in the case of most anglers such a contingency is not at all remote, if your reel happened to be one of the smaller sizes you would be put to the expense of a new reel. With a 100-yard reel you would merely remove some of the core line. On the whole the 100-yard size is the best. This reel will hold all the line you are ever likely to need in trout

fishing and, when using the customary 25 yards of level E or F line, it allows a good-sized core of other line to be wound on the spool for the purpose explained above. But for very short, light fly-rods a smaller reel must be used to obtain proper balance, and since, in this case, a smaller line will be used, the 60-yard reel will answer.

Position of Reel on Fly-rod.

The position of the single-action click reel on the trout fly-rod, as every old hand knows, is underneath the rod with the handle to the right, if you are right handed. If you aspire to an honorable status in the most ancient and honorable fraternity of fly-casters, and for numerous other weighty reasons, take due notice. The proper way to use the reel in fly-casting is, as suggested above, to use it as little as possible. The "shooting" of the line through the rod guides at the end of the forward cast, whereby tournament fly-casters make such remarkable distance casts and the stream fly-fisherman may drop his flies in a desirable spot quite beyond reach of the one-handed caster, is founded entirely on the caster's ability to use in this way the hand not occupied by the rod. All of which is preparatory to the statement that only with the reel underneath the rod is this method at all practicable.

Some Good Reels.

As to how much you will have to pay for a good single-action reel, it may be said that their prices vary from, say, $3.50 to $10.00; you can pay more if you like and,

also, less; good reels of hard rubber and nickel may be had for $1.75 in the 100-yard size. In the same size a reel of hard rubber and German silver costs from $3.50 to $6.00, depending upon the maker — and somewhat upon the seller. The regulation hard rubber reel with bands and handle of German silver or nickel is furnished in pretty nearly the same style by all the tackle dealers, and individual reels of this sort need not here be noted. Two of the many good reels which are worthy of special notice are described as follows: The first is made with German silver side plates and spool, and bronze frame; the reel with side plates 2½ inches in diameter, weighs 4½ ounces and carries 40 yards of E enameled line; the handle is not balanced — a fault or a merit, suit yourself — and the reel has an ample protecting band. This reel costs $8.50 and is worth it. For obvious reasons it would not do to name it more specifically. The other is a solid metal reel of German silver with aluminum spool. It is of the protecting band style and has a balance handle. It is a strong, durable reel and a very handsome one. Its capacity is about the same as that of the first; but it costs more — $10.00. For a very light reel, cheap in price but still a good enough reel, the Featherlight should be noted. Although made very light it is fairly strong. This reel is of the revolving disk order, the English style, and they differ from the ordinary reel enough to preclude description here. They cost about $1.50.

Then there are the English style reels with revolving-disk handle. Almost every tackle dealer furnishes reels of this sort in various grades. The best one known to the writer, all things considered, is an imported reel known as the Malloch. In the 2½-inch size it costs $5.50.

How to Take Care of the Reel.

In the matter of how to take care of the reel it seems better to discuss this in connection with the multiplying casting reels. The mechanism of the single-action reel is so simple, and the work it is called upon to do usually so very slight, that the reel requires little care to keep it in good order — and that is the reason why there is no excuse for not keeping it in good shape. A leather reel case should be procured and, also, used.

The Line.

The perfect line for fly-fishing must, in addition to the requirements of strength and imperviousness to water, be smooth and hard so that it may run freely through the guides, and, while quite flexible, must be sufficiently stiff so that it will not kink or wind about the rod. The only line which fully answers these requirements is the "waterproof, enameled silk line." The waterproof, enameled silk line is perfectly adapted to the purpose of fly-casting, and the wise angler will save himself much trouble and loss of temper and trout, to say nothing of expense, by attempting to use no

other. A line sometimes recommended as a substitute for the enameled line is known as the "oiled silk" line. This sort of line bears no comparison to the enameled line. It does not work well on the rod, and in casting and lasting qualities is far inferior to the enameled line.

The best enameled lines of the present time are solid braided — that is, not braided over a core — from the very finest silk, and are waterproofed in a vacuum, under the exhausted receiver of an air-pump, thus insuring thorough permeation of the waterproofing medium. This process, sometimes called the Halford vacuum process, from the fact that it is the result of experiments by Mr. F. M. Halford, before mentioned as the author of *Dry-Fly Fishing,* is a very complicated one, comprising repeated dressings of the line with oil in the vacuum followed after each dressing by "curing" the line at a temperature of 150 degrees Fahrenheit. The line is finally highly hand polished. The result is not a merely superficial enamel which is liable to knuckle and crack, thus permitting water to rot the line, but the line is in fact, and not in theory or for purposes of sale, waterproof. The whole business of waterproofing lines is surrounded by the tackle makers with a most mysterious and impenetrable secretiveness; consequently it is rather hard for the layman to speak with authority on the subject. The method is substantially as described.

Enameled fly-lines are made in two styles known as

level and taper. The level line is the same size throughout its length. The taper line is tapered toward the end for a certain distance, the length of the taper varying with the make. Tapered lines are either single or double tapered. The single taper line grows finer toward one end only. The double tapered line is fined down at both ends. The taper line will be more particularly discussed in a later paragraph.

For average trout fly-fishing an enameled line size E or F, level, is most used. It should be borne in mind that a fly-line should be selected rather with its casting qualities in view than with reference to its capacity for holding fish. A very fine line, in expert hands, will hold a very large trout; but a line that is too fine does not cast well. The line must have a certain weight in order to carry well through the air. The careless or uninformed angler frequently makes the mistake of using a light line on a heavy rod, or, possibly, a heavy line on a light rod; and in either case the result is absolute inability to cast with any sort of efficiency. Even by expert casters good casting cannot be done with a rod and line mutually unfit; and that the beginner can do better is doubtful. With carefully and well-selected tackle the beginner is sure to have his troubles; but with hastily and poorly selected tackle the agony is soon over — the tentative fly-fisherman simply quits the game.

For a ten-foot rod having plenty of backbone select size E.

Size F is best for rods under ten feet and rather light.

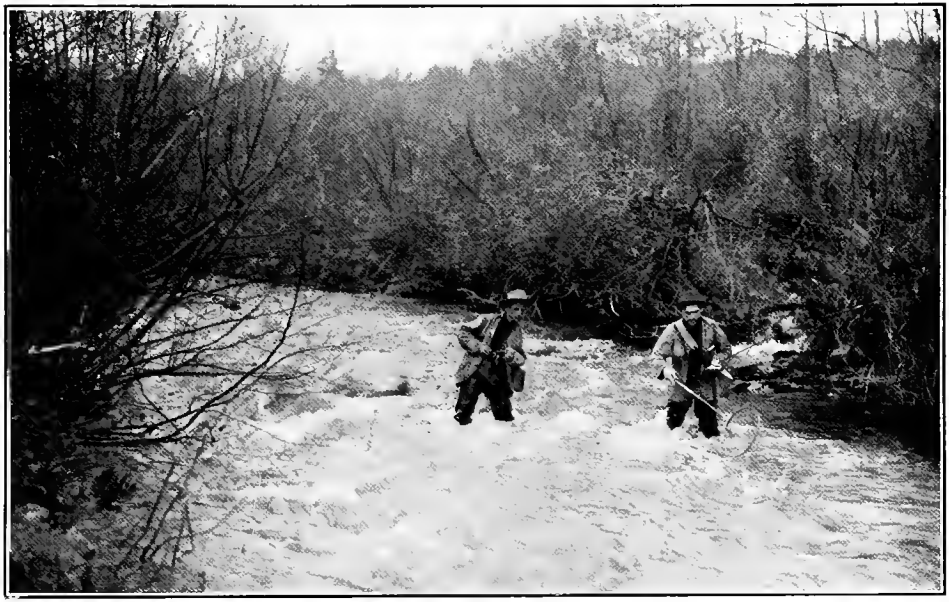
It may seem to you that these lines are rather coarse for small stream fishing where the water is very clear, but the six-foot gut leader supplies the necessary terminal fineness.

A good quality size E enameled line tests 28 pounds; size F 22 pounds. Manufacturers have a tendency to make fly-lines in fancy colors. Select a line of subdued color, one that will be inconspicuous in the water. Some dealers list their lines by number instead of by letter. The following shows the corresponding sizes beginning with the smallest: No. 6=H, No. 5=G, No. 4=F, No. 3=E, No. 2=D, No. 1=C.

These lines come usually in coils of 25 yards. For ordinary occasions one coil is all that the angler need purchase; but if the fishing is to be rather heavy, as in some of the Maine streams and lakes, or for sea trout or landlocked salmon, forty yards will be necessary. A line twenty-five yards in length allows the angler, as above noted, to use a core of cheaper line when a 100- or 80-yard reel is used.

Level vs. Taper.

The taper line has its advantages and also its disadvantages. Chief among its claims to precedence over the level line is the one that with it longer casts are possible. It has frequently, in theory, been conclusively proved that this is not so — but it is. Taper lines are used as a matter of course by all long-



Great care must be exercised when landing in the rapids

distance tournament fly-casters at the present time. But long distance casting is seldom of use to the stream fly-fisherman. Casts of any necessary fishing distance can be made with the level line. Herein is the advantage of the taper line: it is in the combination of terminal fineness together with the necessary casting weight which is supplied by the "swell" of the line. This combination of fineness with weight is of great advantage for lake fly-fishing, for fishing large, quiet pools in streams, and wide stretches of "still waters." In such places great delicacy and considerable distance are very requisite and the taper line makes this delicacy and distance possible; with it far and fine casts are in the power of the expert caster. In effect you cast a G line to the distance ordinarily only attained by a line of size E. For instance, take a tapered line E tapered to size G. That part of the line which is of size E supplies weight and consequently good carrying power and distance; and that part of the line which is approximately size G supplies lightness and delicacy at the end of the cast. Obviously the taper line has its advantages.

But the medal has its reverse. Good taper lines are pretty costly. Also much use of the line generally results in a gradual shortening of the taper due to accidental breakage or unavoidable and natural deterioration, and, eventually, the angler can supply from his tackle box a concrete answer to the question, When is a taper line not a taper line? Obviously the grad-

uated line has its disadvantages. These lines are usually furnished in double-taper. The taper is generally about 18 feet in length. The lines come in lengths of 30 and 40 yards. Sizes E and F, to fit the rod, are right.

Testing the Line.

Whether the line shall be level or taper, is, in a way, a matter of taste; that the line be a fine one, in the sense of quality, is a necessity. There are a great many cheap and worthless lines on the market although they are, presumably, "enameled, waterproof, braided silk lines." When purchasing a fly-line see that its surface is smooth, hard and free from stickiness. Bend over two inches of the end of the line and twist the strands together hard. If the enamel cracks or gives at any point a white spot will tell you that some other line is preferable. Extremely high polish is not imperative; in fact, a certain firm of tackle dealers advertises the fact that its best line is not highly polished since, they say, a too smooth line slides so freely through the water as to hamper good casting — which, it would seem, is getting things down to a rather fine point.

The line should also be tested from time to time, as to its strength, during the fishing season. Experiments made by Mr. Wells and others show that a trout pulls, approximately, its own weight. The locality where you fish and the size of the trout you are liable to take will determine measurably how far an old line may be trusted. As a matter of fact, before a line has

become so old as to be the object of suspicion the enamel will have worn down and the line become so limp and flexible as not to work well on the rod — when you will discard it on general principles. This is in the case of a line originally of good quality and subsequently well cared for. As above stated, a line, according to size, will test from 22 to 28 pounds when new. It should not be trusted when it fails to pull half its original test. Sudden strains and hard pulls on the line frequently happen from various causes when fishing, and a break in the line generally means, if nothing else, the loss of leader and flies.

Enameled fly-lines need not be the object of so much solicitation to the fly-caster as are the fine un-waterproofed casting lines to the bait-caster. But the enameled line should not be neglected or abused. It may be sufficiently dried by running it through a cloth held in the hand, and this will also tend to keep it straight and free from tight coils caused by being wound upon the reel, as a result of which the line will work better in casting. If occasionally dressed with deer fat the line will work better and last longer. For smoothing and polishing enameled lines tournament casters use powdered graphite. During the winter the line should not be kept tightly coiled on the reel.

Care of Line.

Good quality level enameled lines cost about $1.75 for 25 yards size E. The cost varies slightly with the different dealers and for the various sizes. An

average price for a 30-yard double-tapered line, size E, is $2.50. Very fine quality double-tapered lines for tournament work cost rather more; say, $4.00 for 40 yards. All the best dealers carry lines of excellent quality in the best grades, all about equally good. A very excellent fly-line is the English soft-enamel line. By some they are considered superior to the American lines. So far as the writer knows, only one American firm, located in New York, regularly supplies these lines. They are furnished only in double-taper.

Cost.

If your fishing trip will take you far from the tackle shops have a reserve line on the reserve reel. It is a good deal better to be prepared for tackle losses than to have to borrow from a friend — especially when, as most often happens, the friend is not in a position to lend.

Reserve Line.

Leaders.

It is impossible to place too much emphasis upon the quality and suitability of the leader or, as it is sometimes called, the casting-line. Since the leader is a link in the chain between the angler and a hooked fish, and since a chain is only as strong as its weakest link, it follows that the strength of the leader must be unquestionable. And in the matter of selection the leader must be suited to the water and the fish where the fishing is to be done. So the angler should be

able to judge accurately the quality of leaders, and also know about the different sizes in which they are made for various conditions. Briefly, the material from which leaders, and the snells of flies and hooks, are made, is the silk of the Spanish or Italian silkworm, the silk or "gut" being drawn from the worm to the desired length (from 10 to 15 inches, the short lengths being afterward knotted together to form the complete leader) and subsequently sorted and made into bunches or "hanks" according to caliber and quality. As a matter of fact the silk is drawn out to a greater length than the final length of the strand, for there is considerable waste at each end of the strand on account of the manner in which the gut is cured and made into hanks.

How to Tell Good Leaders.

Good quality gut is round, hard and smooth. Cheap gut is fat in places and frays easily. When testing a leader look over its length very carefully for flat places. Leaders which are very faulty in this respect can sometimes be discarded at sight, but often the flatness can only be detected when the gut is rolled between the fingers. Flatness spells a degree of weakness that is by no means to be trusted. For hardness test the leader between the teeth. Certain writers about fishing tackle, in referring to silkworm gut, have used the terms "clear" and "transparent," and recommended that the angler use only leaders having this characteristic. As a matter of fact, almost all gut on the

market undergoes a bleaching process which turns it white and practically opaque.

Testing the Leader.

Before using the leader it should be tested for strength, and in this connection it should be said that care must be taken not to over-test it as this results in weakening it. For average fishing a leader that tests three and a half to four pounds is amply strong. Attach one end of the leader to a hook in the wall and use your balances. Pull slowly and steadily until the leader snaps — it happens pretty often — or shows the necessary strength.

Sizes of Gut.

Some dealers list silkworm gut, beginning with the thinnest ordinarily sold, as follows: Regular, Padrona Second, Padrona First, Marana, and Marana Double Thick. Others have discarded this nomenclature and list in this way: Light Trout, Heavy Trout, Heavy Bass, Extra Heavy Bass, Salmon, and Heavy Salmon. For average fishing, the locality and conditions making some difference, the first two sizes in each list are the most used. Leaders may be had three, six and nine feet in length. A nine-foot leader is too long to use on a trout fly-rod since there is danger of reeling the knot between line and leader through the tip-guide, when the line is at once locked fast. A six-foot leader is about right and this may be made by looping together two leaders of three feet, preferably of different caliber, so as to form a tapered leader.

Gut smaller in caliber than Regular can be obtained from most dealers and is known as Refina and Fina, Refina being the thinnest. "Drawn" gut is the thinnest obtainable and is the result of stripping the natural gut through diamonds or steel plates thus reducing the caliber and paring away all inequalities. Drawn gut is mostly used by English dry-fly fishers and, at times, is useful to the American angler when fishing extremely clear streams where the trout are highly educated. Much annoyance may be avoided by always having the leader and fly-snells of about the same size gut; otherwise the cast will continually become tangled; for if, for instance, you are using a fairly thick leader and dropper-flies tied on fine gut, the fine snells will not stand away from the leader but wrap themselves around it persistently.

The Color.

As a rule leaders may be had in three colors: natural (white), mist color and tea color. As a bone of contention among anglers the question of the proper color for leaders is unequalled. When all is said the size of the leader, fine leaders for clear streams and shy trout, is far more important. Leaders of natural color are as good as any. In this sort of thing it is necessary to be consistent, and if you use a mist color leader your flies should be tied on mist color snells. Almost without exception flies are tied on natural gut. I know one tackle maker, however, who is certainly consistent. Wide experience has taught him, at least, that trout

can only be taken upon flies with tea color snells and Sneck hooks, used on tea color leaders. Love or money cannot obtain from him a natural gut leader, a fly tied on a natural gut snell, or a Sproat hook. And there you are.

How to Tie a Leader.

Making rods and tying flies are attempted by only a few anglers, comparatively speaking, and success in these things only crowns the efforts of those who have considerable mechanical skill. But tying a leader is another thing. It is so simple and, moreover, saves so much expense and has so many advantages in other ways, that every angler not only can, but by all means should, tie his own leaders. A very great advantage of the homemade leader is that you can tie in the dropper loops just where you want them. And you should know how to tie a leader, anyway, because then you can make over a "tailor made" leader to suit yourself; or, if you accidentally break a leader when fishing, or break one in testing it, you can make the necessary repairs.

Briefly — and the following is incorporated here because I know of no place where the story is told briefly — the first thing to do is to get a hank of gut from the dealer. They come generally 100 strands to the hank, and, as above stated, from 10 to 15 inches in length. The 12-inch is a good length. Select six or seven strands according to the length of leader desired,— a five-foot leader will do for two flies, six feet

for three,— cut away the waste at each end of the strands and soak them for an hour or so in tepid water. The method of connecting the single strands is as follows: When the strands have been rendered sufficiently pliable by soaking, tie a half-hitch, loosely, at the end of a strand, put the end of another strand through the loop in first, and then, again loosely, tie a half-hitch around the first strand. Then, separately, draw each knot tight and, finally, pull the two knots together good and hard. This is known as the single water knot. To make the loops at each end of the leader, bend over for about two inches the end of the gut so that it lies along the rest of the strand and tie a half-hitch, an ordinary knot.

The end loops as well as the dropper loops should be made as you go along and before the gut dries. The dropper loops are best made at the end of the strand, the junction of two strands. For the dropper loop tie loosely, without pulling tight, at the end of a strand, an ordinary half-hitch as for an end loop; put the end of the next strand through the small knot-loop (the small knot at base of half-hitch loop) in the first, and then proceed as when tying two strands together. It sounds very much harder than it really is. The leader should be tested, and suspended with a small weight to straighten it.

Leaders must always be well soaked before using them for fishing. The kit must contain a leader box, preferably of nickel, as the aluminum ones are too

fragile. The leader box will have two felt pads and when these are wet and the leaders put between them the gut will become pliable and without tight coils in a short time. It is safe to attach the flies to the leader when the fly-snells and leader are dry, if you do not draw the loops tight. Have plenty of leaders or, better, a hank of gut, when starting on a long trip. At the very least three leaders should be carried on a one-day trip. Six-foot leaders of good quality cost about $3.00 a dozen in trout sizes. Hanks of gut, good quality, for trout sizes, are 75c to $1.50.

Use and Care of Leaders.

CHAPTER VI

FLIES THAT TROUT LIKE

THE true theory of the artificial fly is that the fly should imitate as closely as possible the natural insect life of that particular stream the angler may be whipping at the particular time he is fishing that stream. It follows that the fly-fisher should observe as carefully as may be such natural flies as are to be found about and over the water and, in the choice of his cast, see that the artificials bear the closest attainable resemblance to the natural insect life observed. Some anglers, not many, who are able to tie their own flies skilfully, make a practice of first noting carefully the insects upon the stream and then, at the stream-side, dress the imitation before beginning to fish. Naturally, at times, those who follow this plan get a good many trout, far more than the angler who simply depends upon his stock of tailor-made flies. But the American angler who follows the above plan is a very rare bird, however numerous they may be in Merry England.

As a matter of fact it is only in very much overfished streams that exact imitation of nature assumes

great importance. In wild waters any of the well-known stock-fly patterns are sure to be successful when the trout are rising; and, when the trout are not rising, quite often, even generally, you can imitate nature until you are black in the face and still have to eat bacon. Exact imitation of nature in trout fly-fishing is best exemplified by the methods and flies of the British dry-fly fisherman. This is a subject rather too advanced to enter upon herein further than a few notes under the later subject of dry flies which will be taken up farther on in this chapter, after some of the general principles have been laid down.

Simple Rules for Flies.

Before discussing the various forms of flies, hackles, palmers, reversed wing, matched wing, floating dry flies, etc., the hooks upon which they are dressed, how they are tied, and other matters connected with the trout fly, there are a few rules, quite universally applicable and usually true, which should be stated. If you know these general trouting truths it will help much in the selection of flies. First, then, do not forget when filling the fly book, that on bright, clear days very small flies of subdued colors are most successful; and, secondly, that on dark days larger flies of brighter coloration are the best. Flies tied upon No. 8 hooks may with safety be called normal. As a stock size trout fly, a good "meat" fly on almost all waters, the No. 8 is practically universal. Have the greater part of your flies of this size with a few others of the best

patterns in larger and smaller sizes for unusual conditions. Do not fill the book with gaudy flies, reds, blues, and the like — they look pretty but they are not practical. Flies of subdued colors, grays, browns, etc., are very much the best; in fact, it may be truly said that, save in the wildest of wild waters, where the trout are totally uneducated, gaudy flies are of no use whatever.

As a change from the flies of more modest coloration the fly-book should contain a number of flies of brighter tints, but it is not necessary that these be of startling colors. There are several good flies which, while they are very attractive and noticeable on the water, are dressed in very good taste — not "loud." A scarlet ibis, for instance, a fly with bright red wings and hackle, with body gilt-wound and equally anarchistic, is guaranteed to scare a trout of such a stream as the Beaverkill, in New York, or of the trout streams of the Berkshires, into fits. Diversity in the contents of the fly-book is also desirable to meet the requirements of various water conditions. When the stream is low and clear the smallest flies are necessary for success; and when the stream is slightly flooded and discolored rather large flies must be used.

Use Good Flies.

When buying flies select only the best grades. They cost from $1.00 to $1.50 a dozen for the best grade flies of the best fly-tiers; and the flies of this sort will outwear the cheaper ones a dozen times. By all means steer

clear of the cheap trout fly. They are commercially tied by the million by people who do not in the least know what they are to be used for. In consequence they disintegrate with facility and, as long as they hold together, are mere useless bunches of feathers — not at all resembling either in color or form the flies tied by men who have "been there." A fly of good grade will sometimes last for weeks of pretty steady fishing, and have a good many trout to its credit, without being put out of commission. The cheap fly is a snare and a delusion to the angler only.

Hooks.

In the final analysis the question of what style of hook is the most efficient is of great importance. In fact, one could almost say that the choice of the hook on which the fly is dressed is the great question of tackle selection. For no matter how wisely and well the angler discriminates in regard to rod, reel and line, after all it is the hook which by its efficiency or the lack thereof produces results or the contrary. But, again in the final analysis, we find experienced anglers using with success a good many different sorts of hooks. It would seem then that, with a few exceptions, the most popular hooks are all about equally good, and that the angler who fails to hook his fish should not "blame the gun." Briefly, and theoretically, the most efficient hook is one having a "direct draught" so that the point is immediately sent home in the direction of the force applied. However, we will not here discuss angles of

draught. If the flies you buy are tied upon either Sproat, O'Shaugnessy, or Sneck hooks, you should have no trouble with them. I have mentioned the Sneck hook, not because I like or use it myself, but because in the opinion of many experienced fly-fishermen it is a good hook. Another good hook is the Pennell. Personally I always use the Sproat or O'Shaugnessy when I can find the sort of fly I want tied upon either of them. But a good many dealers use only the Sneck hooks for the smaller size flies, smaller than No. 8, and for the "midges." There is no need to advise only hooks of good grade. If you buy decent flies the hooks are pretty sure to be all right.

Styles of Flies.

In regard to the ways in which flies are made, their mechanical construction and form, there are several well-known kinds. These are: Hackles, palmers, reversed-wing flies, matched-wing flies, "fluttering" flies, and floating dry flies. The hackles and palmers are of quite similar construction and equally efficient. No wings are used in making these flies and the fly consists entirely of the "hackle" and body save rarely when a tail is tied in. The brown hackle is frequently made with a tail of red wool. The distinction between the hackle and the palmer is, that in the case of the hackle fly the hackle is tied at the head of the fly only, while in the palmers it is tied the entire length of the body. The angler when buying flies by mail should remember that the hackles and palmers are made with dif-

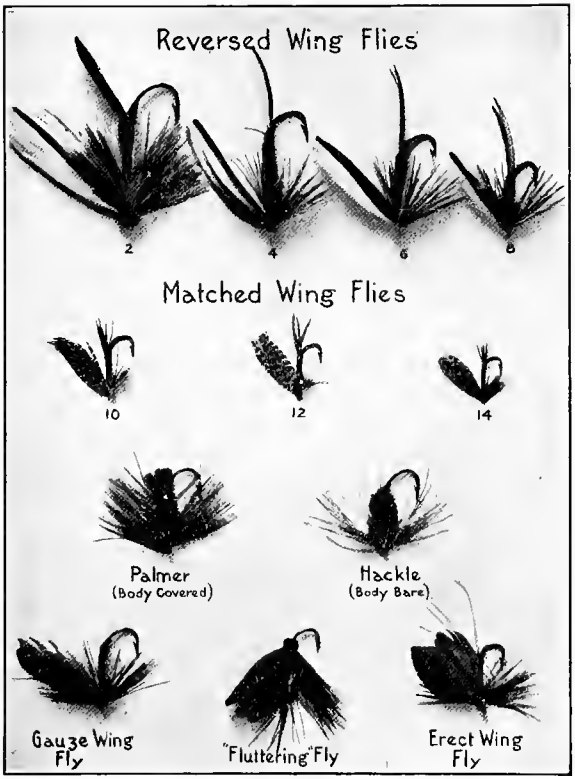
ferently colored bodies to the same color hackle. The brown palmer, for instance, is sometimes tied with a red body (in which case it is properly called the "soldier palmer") and also is dressed with a body of peacock harl, a green body. Both the brown and gray hackles and palmers are very good all-season flies.

Parts of the Fly.

The various parts of the winged fly are the head, hackle, body and tail, the wings and the tag. Not every fly has all of these parts. The ones that seem most to need explanation are the tag and the tail. The tag is simply a few windings of gilt or some other material appearing at the lower end of the body, the material chosen being such as will contrast with the body material. The very best example of the tag is seen in the fly known as the Reuben Wood which has a white body with a more than usually — when properly tied — broad and prominent red tag. The tail is tied at the lower end of the body, extending toward the bend of the hook, and consists usually of a few feather strands. An example of this may be seen in the Grizzly King, this fly having a red tail. In the winged fly the hackle is intended to represent the legs of the natural insect. The hackle flies are representations of larval forms such as the caterpillar.

How Flies are Tied.

In making the reversed-wing fly the fly-tier first binds the wing feather at the beginning of the bend in the hook with the point of the feather in the direction of the



Variety of Form in Trout Flies
Two-thirds natural size

eye or snell of the hook. When the wing has been bound to the hook shank up to the end of the shank it is bent over, reversed, so as to point downward along the shank, and then bound with several windings which not only make the fastening very firm but form the head of the fly. The majority of good quality American flies are made in this way. Considerable insight into the fly-tier's methods can be had by carefully dissecting a fly. Matched-wing flies have two wings and are usually tied upon the smaller sized hooks, 10 to 14. Fluttering flies I have never used and for that reason do not care to discuss. They are made with the head at the bend of the hook and the wings pointing up the shank toward the eye of the hook so that, when drawn through the water, they will, presumably, owing to the resistance, better imitate the struggles of a shipwrecked insect.

Dry Flies.

Since we are here writing principally for the beginner it does not seem advisable to discuss at any length the subject of dry flies; for dry-fly fishing is eminently a method which only the advanced student in the school of fly-casting should attempt. Also dry-fly fishing is properly at home only in England, where it is extensively practiced on clear, slow-moving streams, for highly educated brown trout, the fish we call also the German trout. Rather recently it has been taken up to some extent by a few American anglers on streams more or less suited to this style of fishing; but, by and large, dry-fly fishing

is not adapted to American conditions. However, the angler, merely as a matter of angling knowledge, should make himself acquainted with the methods followed by the dry-fly fishermen, and should know something about the subject of dry flies.

Very little has been written in this country about the "how" of dry-fly fishing, and for this reason, and for the further one that all the large tackle dealers now carry a stock of dry flies and the salesman will doubtless try to sell you some, it may be well to describe as briefly as possible, and with no pretense of treating the subject expertly, what the dry fly is and how it should be fished. The dry fly is a floating fly and is to be fished upon the surface of the water, wherein it differs from the ordinary flies, which are without exception "wet" flies, and to be fished more or less submerged.

The dry-fly purist casts only to a rising trout; he does not fish all the water, according to the custom of the wet-fly fisher, but waits until he sees the circle of ripples made by a rising and feeding fish, and then casts to that particular — very particular, indeed — trout. He works up-stream, casting slightly above the rise, and floating the fly down over the fish. Between casts two or three "false" casts are made without allowing the fly — only one fly is used — to strike the water, in order to dry the fly. Paraffine oil is used on the fly to make it float better and more impervious to the action of the water, in dry-fly parlance, to pre-

vent the fly from drowning. The flies used are very small and in most cases exact imitations of the prevalent insect life of the stream. When expertly practiced the method is a very deadly one. Some dry-fly fishers do not insist on waiting for a rising fish, but fish the best of the water in the manner of the wet-fly caster, a method more appealing to the American angler. Without going into the subject further it may be said that there are occasions when, if you have a few dry flies in the fly-book, you may be mighty glad of it. A list of approved patterns, selected with American streams in view, is given below. Dry flies are usually tied upon eyed-hooks without snells.

Flies on Eyed-Hooks.

Most of the tackle dealers now supply the most popular trout flies dressed on eyed-hooks, that is, without snells. This style of fly is constantly increasing in use among expert anglers for many good reasons. As a general thing when using flies whipped to snells the first part to wear out is the gut at the head of the fly, when the fly itself, no matter how well preserved, is no longer of any use. Flies on eyed-hooks may be carried in greater quantity and lesser space than the ordinary sort. For the flies on snells, if they are carried in any quantity — and they usually must be — a bulky fly-book is necessary. But a large number of eyed-flies may be carried on clips in a small metal box. The custom of tying flies on eyed-hooks is not a new thing but recently their use has grown

more universal. English dry flies, as above noted, are dressed in this way. Personally I do not use the eyed-flies for trout because I am too used to the other kind and do not care to change; and, doubtless, many anglers feel the same way about it. It seems to me, too, that the proper field for the eyed-hook fly is where only one fly is used. Where more than one fly is used, which is almost always the case except in waters so well stocked that mere trout catching ceases to be an object, it is necessary for the leader to have two or three dropper snells tied in or the flies must be previously snelled before attaching them. (Why do not the tackle dealers, since the wearing qualities of the eyed-hook fly and its other good points are beyond need of proof, furnish regularly their trout flies with snells tied-in instead of whipped-on? Is it barely possible that the reason is because, then, they would not sell so many flies?) The angler who knows how to tie leaders and snells should have no trouble in handling the eyed-flies. Also, it is possible to buy at the tackle shops looped snells for use with eyed flies.

How to Attach Eyed-fly to Leader.

To use eyed flies it is necessary to know how to attach them to the leader end or snell. The method most in use for turned down eyed hooks is known as the "jam knot." It is as simple as efficient. To attach a fly by this method, pass the end of the leader or snell through the eye of the fly to-

ward the bend in the hook, bend back this end along the main strand of the snell and tie a half-hitch around the main strand without drawing tight; slip the half-hitch loop along and down the snell and just over the eye of the hook, and then pull tight. Finally cut off the gut end as close as may be consistent with safety.

List of Flies.

It is said that there are some two hundred known trout flies. Perhaps there are. The practical angler does not at the utmost use more than two dozen kinds, but is careful to have his favorite flies in good numbers as regards size. Do not practice economy in buying flies; it will surprise you how fast they will disappear — and some time you will find yourself on the stream without the fly which you are morally certain would make a killing. Have only a few different flies, of the best patterns, and have these in good quantity and in at least three sizes — rather large, medium and small. As above stated, the No. 8 is the most generally useful size. No. 10 is usually small enough; and No. 6 usually large enough. It is a good plan to have a few "midges," flies as small as 14 and 16. The opinions of anglers as to the most effective flies are diverse and many times conflicting. There are, however, a number of flies which have received almost unanimous approval, and most of these are noted below. The list of flies given here is founded upon the belief that flies of subdued coloration are by far

the best, and also upon the fact that the writer has used all of them, at different times, in different waters, with rather better than indifferent success:

Beaverkill	Gray Palmer
Coachman	*March Brown*
Cowdung	Stone Fly
Montreal	*Queen of the Water*
Shoemaker	Hare's Ear
Black Gnat	Gray Drake
Brown Hackle	Governor
Gray Hackle	*Cahill*
Brown Palmer	Willow.

Flies of brighter coloration, some of which should be in the fly-book, are:

Grizzly King	Royal Coachman
Reuben Wood	*White Miller*
Professor	Silver Doctor.

For Maine and Canada, add: Parmachene Belle; Scarlet Ibis.

The following dry flies are well-known and favorite patterns:

March Brown	Black Gnat
Beaverkill	White Miller
Queen of the Waters	Cahill.

Also the May flies which are tied on larger-sized hooks.

Flies italicized above are the very best in almost all waters, and you will notice that there are just one dozen of them. To even further reduce the number, I will say that, personally, I would have no objections whatever to being turned loose on a trout stream with only the following six flies: Coachman, Cowdung, Cahill, Beaverkill, Grizzly King, Queen of the Waters. In the writer's opinion, one in which he is by no means alone, the Coachman is the very best all-round trout fly — a fly good under all conditions of wind, weather and water, at any time of day, at any time during the season, and on any stream. It is not meant to be understood that on occasions other flies will not be more successful; merely that the Coachman is a very consistently resultful fly, a good, steady performer. Used as end-fly, it helps you to keep track of your cast in broken water, the white wing being easily seen; and this is of no little importance.

Buying Flies.

When buying flies by mail, it is a good plan to have sample flies of the various sizes sent you by the dealer you intend to buy from. The reason for this is that no two dealers sell exactly the same size fly on the same hook number. Sometimes this is due to the difference in the hooks used, and sometimes to the manner in which the fly is dressed. You can never tell. A No. 8 fly sold by Jones will be the size of a No. 10 sold by Smith, and occasionally the variation will be even more. Send for samples. If you possibly can, get

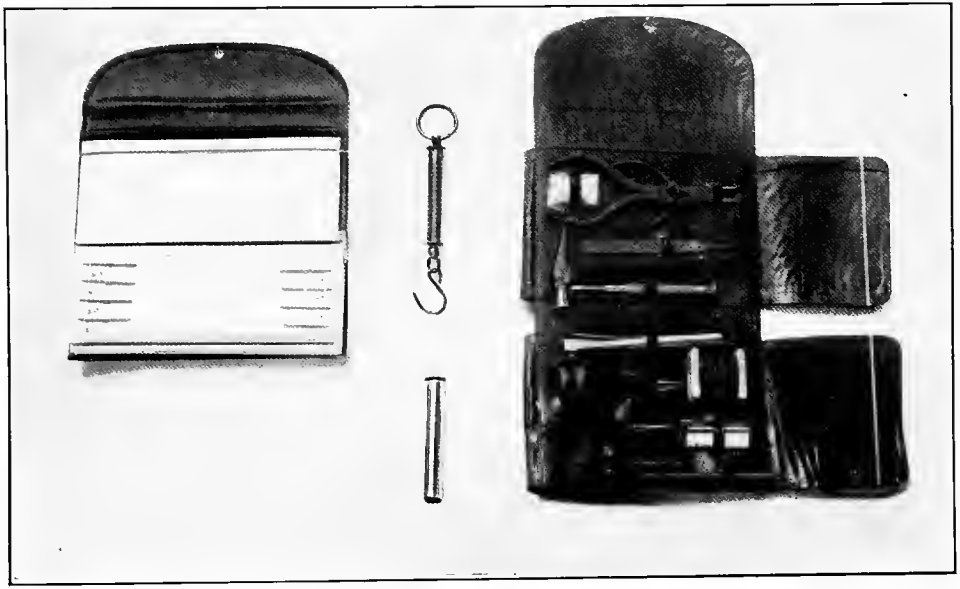
flies tied lightly — not bunchy — with light, small bodies and not too much winging.

Fly-books and Boxes.

The thing to remember when selecting a fly-book for stream use is that sooner or later, probably sooner, it is sure to get thoroughly wet, not only once, but several times. It follows that only a well-made book, something a little better than one made of imitation leather and glue, will stand the racket. Its capacity should be at least four dozen flies. A very good book, strong and well-made, is one furnished with celluloid leaves, transparent pockets, and with end-clips and spiral spring center-bar to hold the flies. Such a book will cost about $3.50.

For carrying eyed-flies metal boxes are best used. Some of the boxes are made with metal clips to hold the flies, and others are lined with cork. A good little box (just for an experiment to see how you like eyed-flies) holding fifty flies on clips, costs 75 cents. Better ones range up to $2.50 or $3.00.

Small cedar boxes may be had for keeping flies moth-proof during the close season. Do not forget that artificial flies at one-fifty the dozen form a staple article of diet for moths. At the end of the season take out all the flies from the fly-book and put them either in a cedar box such as mentioned or in an air-tight glass jar — and even then it is better to look them over once in a while.



Wet-fly Book, Pocket Scales, One-drop Oil Can, and Pocket Kit of Tools
for use in making flies and mending tackle

CHAPTER VII

CLOTHES AND OTHER ACCESSORIES

IN addition to the basic fly-fishing necessities such as the rod, reel and line, there are several articles of tackle, some of which properly form a part of every fishing kit, and others which are more or less optional. The reader should not conclude that everything mentioned in this chapter is a vital necessity without which it is impossible to catch trout. On the contrary it is by far the best plan to keep the outfit down to essentials. Just what these essentials are is a personal matter; and whether you should indulge to any great extent in these tackle accessories is, in a measure, a matter of the pocketbook. The same remarks will apply to selecting outing clothes for use on the river, and other articles of general equipment. At any rate you may be assured that the "genial salesman" into whose clutches you will fall when outfitting for the fishing trip is a person utterly without conscience who will try to sell you a pack-basket of truck that you have absolutely no use for. Of course you will buy some of it just to be decent; but do not buy it all. Leave some of the things to experiment with

next time. Each trip will teach you a little more about the things that you do and do not need.

Trout Basket.

For stream fishing a creel is necessary; also, when fishing from a canoe, or a boat not provided with a fish-well, it is a good plan to use one to keep the fish in good shape. A nine-pound basket is amply large for the average run of trout fishing. Wicker creels are the best and these may be had in several styles. A leather-bound creel is one of the newest productions and one calculated to last a long time. A basket stained green or brown looks well — not that that matters much — and will last longer than a plain one. Be sure, at any rate, to get a creel with leather cover-hinges and "patent fastener." With the ordinary wicker hinges the cover will work loose in a short time; and if the creel has the ordinary wicker staple instead of a leather and metal lock you must use a whittled plug which is continually falling out and, if not tied to the basket, getting lost. Have the opening in the basket-cover at the end rather than in the middle. When fishing, line the bottom of the creel with washed-out moss or ferns. This keeps the creel cleaner and preserves the trout. A nine-pound creel costs $1.25.

The basket sling should by all means be of the style that leaves the shoulder of the casting arm free. This sling is known as the "new style." The strap supporting the basket passes over the left shoulder and the

creel is held in place by a light strap around the body under the right shoulder. The old style sling hangs the basket from the right shoulder across the body, thus bringing all the weight on the casting arm. Be sure to get the new style sling when you buy your new creel. Best, $1.25.

Canvas creels are made in different styles and for regular use are not to be recommended. They keep the trout in mussy shape and are otherwise undesirable. They are, however, for occasional use, very handy, since they fold up and may be slipped into the pocket of the hunting coat where they can be carried easily and with little inconvenience. $1.00.

Landing Net.

While a landing net is a first-class nuisance on a brushy trout stream, continually getting fouled in the brush, the angler who wishes to land the rather infrequent "whale"— the loss of which always overshadows the basketing of numerous small fry — will religiously carry one. It is by far the best plan always to have a net along no matter how much of a bother it is. When fishing from a canoe the net should have a handle at least four feet in length. For wading, a short-handled net with elastic cord to sling over the shoulder is the best sort. The take-down nets with folding metal frame are the least troublesome and very satisfactory. A net frame and handle of this sort for use when wading will cost $1.00. The net itself must

be purchased separately and costs about 40 cents. On a long trip one should have at least two landing nets as they are easily lost.

Tackle Box. The angler who specializes on trout fishing does not really need a tackle box since he will probably use a stock fly-book, a stream fly-book and leather reel cases, and the articles which need a general receptacle are very few. But almost all trout fishermen condescend to take a few bass or other fish in season, and the accumulation of tackle of various sorts soon reaches a point where it is necessary to have "a place for everything and everything in its place"— otherwise, chaos. The one thing to be sure about is to get a box that will pack easily in a suit case. Most of the boxes are made short and rather high, and are, consequently, unhandy to carry about. Avoid too many trays. A tin box will hold just as much tackle as a de luxe box in sole leather. The leather boxes are, however, very much the stronger and better; and for a canoe trip on which things are unavoidably banged around a good deal the leather box is the only thing; the tin boxes are soon total wrecks. Prices range for the japanned tin boxes between $1.00 and $5.00. The leather boxes are rather expensive: $7.00 to $15.00. It is a good plan to have two boxes, one large one for the general kit, and a small one for the pocket — an especially good plan for the bait-caster.

When you get the "big one," if you would do the thing scientifically and right, it is necessary — although

it may spoil a good fish story — to measure and weigh him. For ordinary trout, fishing scales weighing up to four pounds, by ounces, are right. And if you get a trout that is too big for your scales — you may if the fishing is done where brown trout are found — you will be mighty glad of the excuse to swagger into the village "store" and request the proprietor to weigh him; of such, to a trout fisherman, is the kingdom of heaven. For measuring nothing is better than the little self-winding tapes in a case about the size of a half-dollar. A good pair of scales — poor ones are worth less than nothing — will cost about $1.00. The tapes may be had at any stationery store for five or ten cents.

Scales.

A line releaser is one of the things you may properly leave to experiment with at some future time — and do this consistently. If you decorate a few trees with leaders and flies it will teach you to be careful about the back cast and accurate with the forward cast, both of which things are very desirable. Description of the mechanics of this contrivance seems hardly necessary. It doesn't infallibly release. Price, $1.00.

Line Releaser.

This is a good investment. If you have a repair kit — to say nothing of its use on the stream for you will probably leave it at home — you will undoubtedly learn eventually how to rewind, re-varnish and otherwise tinker rods and other tackle, which is not only practically interesting but

Repair Kit.

cheats the professional repairers. Anglers who can indite a sonnet to a "speckled beauty," or write a "Song of the Reel" are in the majority. Those who can rewind a fly-rod are vastly in the minority. A very ambitious repair kit, the best available — with one exception — contains pliers, nippers, screw-drivers, tweezers, oil-can, ferrule cement, file, wrapping silk, and various other articles too numerous to mention, and all are enclosed in a handy folding leather case small enough to go into a pocket. But it costs a pretty penny — $7.50. The "exception" costs $12.00. Other less comprehensive and luxurious kits, sufficiently adequate however, cost $1.50.

Miscellaneous Duffle.

A small-sized Adirondack pack-basket may be highly recommended to the angler — especially the canoeing bait-caster — for use even on short trips. Therein may be carried the rod, net, tackle box, sweater or rainproof coat, camera and other duffle. It makes one package of many and tends to avoid having tackle and other stuff scattered about the boat or canoe where it is underfoot and liable to be smashed or water-soaked.

For late spring and summer fishing a good fly-dope is a necessary part of the outfit. Frequently it spells the difference between fly-fishing and mere fly-fighting.

A folding film camera is best adapted to the angler's needs, and the "postal" size, 3¼x5½ is a very good one. Have it fitted with a graduated shutter giving exposures from one second to 1-100 of a second, not the

cheaper TIB affair. Usually the only possible successful exposure is a very slow instantaneous on account of the shade of the woods. Unless you are out for photographs purely or primarily do not attempt to use a plate camera.

In the matter of shooting-irons there is no excuse for taking anything larger than a .22 of some sort on a fishing trip. "Combination" hunting and fishing trips are not usually very successful in either branch. If the fishing is to be done from a canoe a .22 repeating rifle is the thing, using either the long-rifle, the Automatic or the .22-7. But if wading is the program a single-shot pistol with barrel heavy enough to handle the long-rifle cartridge without excessive "jumping" is most practicable. The new smokeless and greaseless long-rifle cartridge should be used. This cartridge, although only a target size, will account very nicely for grouse, ducks, and the smaller furred game — if you shoot straight.

When fishing brushy mountain streams and small swamp brooks one of the handiest things you can have along is a light-weight pocket-axe that you can slip in a hip-pocket and never know it is there until you want it. Perhaps, some day, after you have gnawed apart a good-sized and very tough tree with a jack-knife, to make a bridge over a flooded brook in a tamarack swamp — or walked ten miles to get around it — you will remember this.

In the matter of what to wear it is difficult to give

advice which will be generally applicable. Trout fishing is done under a variety of local conditions and at different seasons, in the woods and in near-home meadow lands, by wading the stream and by casting from boat or canoe. The articles here mentioned are suitable for stream wading in the spring or summer in such streams as those of the Catskills, the Berkshires, the Adirondacks or streams of like character.

Clothing.

Woolen underclothes and socks of medium weight are by far the best for the purpose. The danger of cotton lies in the fact that when wet with water or perspiration it cools very quickly.

Nothing is more suited to the trout fisherman's needs than a hunting coat of canvas, khaki or duxbak, the last being practically waterproof and an especially good material. These coats are roomy and — here's the reason — they are all pockets. For warm weather trout fishing a sleeveless khaki coat cannot be beaten. Coats of this description cost from $2.00 to $5.00.

Trousers of any of the above materials and also of corduroy — the latter if the country is very rough — are suitable. Another very tough material, and lighter than corduroy, is fustian. Knickers or riding breeches are good to wear inside boots and waders since they do away with the bunchy fold necessary when wearing long trousers. Khaki riding breeches of the army pattern have no hip-pockets, a great fault in them for field use but one easily remedied. Corduroy wears like

iron but is nasty stuff when wet, dries slowly and is very heavy. Any old pair of trousers will do. Prices for canvas, khaki and duxbak, $3.00 to $3.50.

A felt hat with medium brim is the best for all-round trout fishing wear, particularly good if you are caught out in a hard rain. Where a good deal of brush work is to be done a close-fitting cap of some tough material is perhaps preferable because it is not quite so apt to be caught and pulled off by branches; also the stiff peak can be pulled down over the eyes affording them great protection. For warm weather fishing nothing is better than one of the round duck hats; this when you are not going to be in the woods to any extent.

Shirts of gray flannel and a sweater complete the outfit with the exception of waders.

Waders.

The choice lies between rubber hip-boots, regular wading stockings to be worn with wading shoes, or wading pants worn with wading shoes. Wading pants and stockings are good to use when you are living or camping near your fishing; otherwise, they are, in some ways, undesirable. Woolen socks should be worn between waders and shoes to keep the feet of the waders from chafing. An outfit of mackintosh stockings and wading shoes will cost about $10.00; wading pants, $2.00 more. I do not believe that anything is better suited to the purpose, under average conditions, than a good pair of light-weight hip-boots. For wading very rocky streams

have them leather soled and the soles studded with a few soft hobnails. Wear inside them a pair of well-fitting woolen socks — not the "rubber-boot moccasins" which are usually furnished and are sure to work down at the heels and make things generally uncomfortable. The mackintosh boots are also good; also more expensive.

In the warmer months, if you are so situated that you can change into dry things reasonably soon after you are through fishing, the best plan is to wear neither boots or waders but to wade the stream in woolen socks and an old pair of knee-high hunting boots with small slits cut in them to let out the water; or the regular wading shoes may be worn with canvas leggings. Many anglers prefer to get wet from the "outside in" rather than from the "inside out." Following this plan you do not, as Mr. Wells expressed it, "stew in your own juice."

General Summary of Trout Fly-Tackle and Equipment.

A good outfit for average trout fly-fishing:

Rod: 10 ft., six-strip, split-bamboo; weight, 6 ounces.

Reel: Single-action click; rubber and German silver; 100 yds.

Line: Waterproofed, enameled silk, size E; 25 yds.

Leaders: 1 doz., 6 ft.; "medium trout"; better make them yourself.

Flies: 4 doz., on No. 8 and 10 hooks; a half dozen of each kind, four of them on the No. 8 hooks; Coachman, cowdung, March brown, queen of the waters, Cahill, Montreal, grizzly king, Beaverkill.

Fly-book: To hold four dozen flies.

Leader box: Nickel.

Creel: 9 lb., willow; new style sling.

Landing net: Metal frame take-down with elastic cord.

The above will form a pretty fair basic outfit. You will add various articles and, also, various items will constantly be subtracted from this list by wear and accident.

Wear: Canvas, khaki or duxbak hunting coat. Trousers of same material. Woolen underclothes and socks. Light-weight hip-boots or waders. Felt hat.

Carry — if you feel like it — one or two of the following: Waterproof match safe; pocket axe; .22 pistol or rifle; line releaser; scales and tape; repair kit; camera. Do not load up with a lot of superfluous duffle of only semi-occasional or questionable utility. You will have trouble enough without packing a sporting goods store through the brush.

Don't forget your pipe and tobacco — and plenty of matches.

Remember, also, when you have the chance to catch more trout than you ought to, not to do it.

And —" may the East wind never blow."

Note.— The foregoing chapters are in many ways applicable to the subjects treated in the following. The reader who is not immediately interested in trout fly-fishing should, nevertheless, read the above, especially with regard to rod construction and selection. To avoid needless repetition subsequent chapters will be less detailed in many respects.

CHAPTER VIII

THE ROD FOR BAIT-CASTING

WITH the exception of a few scattered articles which have appeared in one or two magazines scarcely anything has appeared in print concerning the tools and tackle required for the modern angling method of bait-casting with a short rod, free-running reel, and some form of bait usually artificial. Recently several books have been published, dealing largely or entirely with angling, but in none of them is more than passing notice taken of bait-casting; and the little that their authors have had to say has been rather misleading than otherwise, simply, it would seem, because they were discussing a method with which they happened to be unfamiliar. For this reason I shall try to make the present discussion as adequate as possible, especially in view of the fact that anglers all over the country are enthusiastic about the sport, while new recruits are constantly joining the ranks, proving conclusively that the game has come to stay.

Bait-casting is usually done for bass, and in the following discussion of the casting rod and other bait-

casting tools and tackle their fitness for use in angling for this game fish will be chiefly considered. The angler having become familiar with casting for bass should have no trouble in making the necessary tackle changes for mascalonge and others whenever it should happen to be necessary.

Rod Materials.

Choice of material for the bait-casting rod is the same as for the fly-rod — split-bamboo in hexagonal and octagonal; greenheart; bethabara; noibwood, a selected quality of bethabara; and lancewood. Steel rods for bait-casting are also made in many styles. While in the matter of fly-rod material expert opinion is unanimously in favor of split-bamboo, personal choice among experts as to the best material for the casting rod is quite conflicting.

For tournament casting, it may be said that split-bamboo is by far the most generally used; from which it would appear that this material, on the ground that tournament casting is the acid test of tackle and methods of tackle handling, is the most likely to prove satisfactory. But, as a matter of fact, when we come down to practical angling and black bass, we find that the solid wood rods, and sometimes the steel rods, are used by fishermen far more frequently than those of split-bamboo. For the explanation of this we have to seek no farther than the character and habits of the black bass and the generally rough-and-ready nature of the fishing for him. The black bass, size for size, is

just about the hardest fighting game fish that swims, resisting to the limit in both the water and the air; and the angler who makes a specialty of bass fishing must be prepared to handle a fish of from one to five pounds — two pounds frequently and very often more — a very different matter from the usual quarter- or three-quarter pound brook trout.

The situation resolves into something like this: If your fishing is to be done in unobstructed waters, where the bass may be safely given his head and where the rod need never be brutalized, use a casting rod of split-bamboo, six-strip preferably; this for the reason that, equally as in the case of the fly-rod, the split-bamboo casting rod, of good quality, is in a class by itself. But if you fish in weedy lakes and rivers flowing through woodlands, where the run which may be allowed the bass is strictly limited, and where, at some period of the play, it is practically certain that you will have to give the butt, it is very much the best plan to use a good, sturdy solid wood rod. For ease and pleasure of handling and the utmost efficiency in casting — the split-bamboo; for hammer-and-tongs bass fishing, the usual sort, a solid wood rod will give you better service.

Solid wood rods for bait-casting may be had, as above noted, in noibwood, bethabara, greenheart and lancewood. Their respective merits are in the order stated. The noibwood rods are, unfortunately, controlled by a single tackle firm and, consequently, "come high." I have used one of them a great deal and may say unre-

servedly that they are the finest casting rods in the market; that is, in solid wood. Bethabara comes next and is hard to find in the tackle stores. I know of only one tackle maker who regularly furnishes bethabara rods. Rods of greenheart and lancewood are furnished by all the dealers in the most desirable lengths and styles.

As a general utility rod for bait-casting probably nothing is better than a steel rod of the best grade — and there are many poor grades. They are furnished in different styles and in all lengths. The best rods are made with solid-cork hand-grasp and independent butt. They are guaranteed for three years. Any number of agates may be fitted, and German silver trumpet guides are furnished regularly on some of them. Provided the rod is wiped dry after using, to avoid rust, it is always ready for use — no frayed windings, warped joints and the like. Of course, considering a rod as merely a casting machine, the steel rod is not the equal of the good split-bamboo and solid wood rods. The steel rod is, however, about four times better than a split-bamboo of equal price. The steel rod is a good one to learn the game with and, also, a very handy tool at any time. Do not, on a trip which will take you out of striking distance of the tackle shops, depend solely on a steel rod. It cannot be spliced.

The history of the bait-casting rod begins with the rod known as the "Henshall," made to the specifications of Dr. James A. Henshall, whose work in the

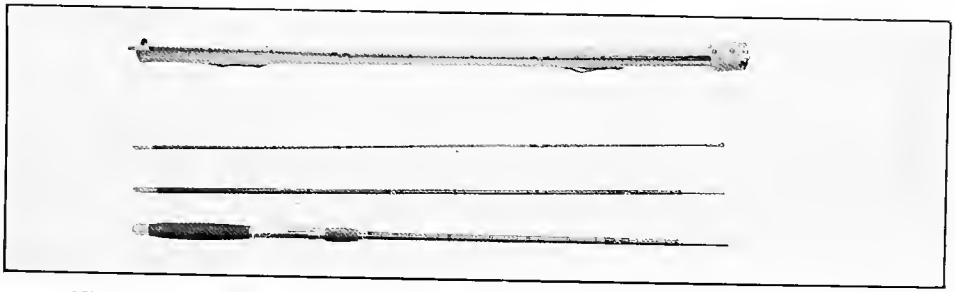
field of angling literature, and in game fish culture, has placed every American sportsman deeply in his debt. This rod is 8¼ feet in length, and designed purely for underhand casting, the side cast, and for casting the minnow and other natural baits, a method discussed in a later chapter. This form of bass fishing, with its accompaniments of live-bait trouble-makers, never acquired wide popularity, the majority of bass fishermen continuing to still-fish or troll or, under favorable conditions, fly-fish. Then, only a few years ago, some anglers in the vicinity of Chicago began to use a very short rod, generally less than six feet, and to cast overhead; a method suited to and evolved from the local bass fishing conditions, weedy, shallow lakes, where great accuracy in casting, attained best by the overhead cast, and a sturdy rod were essentials. The baits used were frogs and various pork-rind baits. Followed then the invention of a number of artificial baits which were very successful and adapted for casting with the short rod — and the game of bait-casting had its inception. Many anglers now favor the exclusive use of artificial baits for bass even as the fly-fishing purist is wont to frown upon the use of bait for trout. This is purely a matter of the personal equation. Many of us can still see some slight, passing merit in a "garden hackle," or, on occasion, some little utility in the plebeian strip of pork-rind.

Length and Weight.

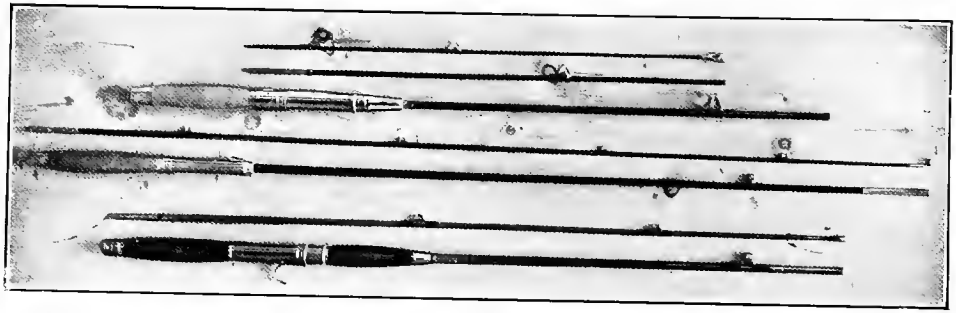
For practical angling it is now pretty generally con-

ceded that the proper length for the casting rod lies somewhere between 5½ and 6 feet. Personally I have cast with a Henshall rod, 8¼ feet, a 7-foot rod, a 5¼-foot rod, and a 6-foot rod. With each of these I have had a good deal of experience under various conditions, and I have talked and fished much with other anglers who used rods of other lengths. For all round fishing the six-foot rod is, it seems to me, by far the best. The average length of the original "Kalamazoo" casting rods was less than five feet; and for long distance tournament work rods of 5¼ to 5½ feet are the most common. But the casting rod for fishing must be adapted to landing a bass as well as to mere casting; and, within reasonable limits, the wise angler will sacrifice casting distance to efficient bass-handling. It has been proven by the experience of a multitude of bait-casters, certainly by my own experience, that the very short rods are mighty poor tools with which to land a bass. The rod, however, must not be too long, for this will make the overhead cast a matter of too much difficulty. In fishing, the side and overhead cast will be used impartially. The six-foot rod is long enough to handle a bass well, and short enough for overhead casting; in fact, it answers all the requirements of the bait-casting rod. The six-foot rod is hereby recommended.

The matter of weight will be regulated by the length of rod and the rod material. Split-bamboo casting rods average about an ounce to the foot; solid



The "Henshall" Casting Rod; length 8¼ feet. The photograph shows a lancewood rod



Three Types of Bait-casting Rods

Top, three-piece steel, costing $7.00; center, two-piece split-bamboo, with extra tip, $18.00; bottom, two-piece solid wood, extra tip, $9.00

wood rods slightly more; the steel rods are the heaviest. A six-foot split bamboo casting rod should weigh about six ounces; one of noibwood or greenheart, seven ounces; steel, eight ounces.

Number of Joints.

Bait-casting rods are made in one-piece style with independent butt; in two joints and in three joints. One-piece rods are obviously the best and, also obviously, the worst. That such a rod will have the finest attainable action and the greatest strength goes without saying — but the rod doesn't "go" without trouble. They are very unhandy things to carry. For ordinary use they are not desirable. Personally I always suspect a two-piece rod with ferrules directly in the middle where the greatest strain comes; but many costly rods are made in this way by makers who are supposed to know their business. However, the two-piece rod is not here advised. The rod in three joints is the best for the everyday angler; it is handy to carry and preferable in other ways.

Rod Fittings.

In regard to ferrules and ferrule material, hand-grasp material, and the like, the reader is referred to Chapter 3. Guides for the casting rod are very different from those for the fly-rod and demand separate discussion. The short casting rod as it first appeared generally in the tackle stores was fitted with very large guides, made of one or several turns of wire, the diameter of the guides being sometimes as large or even larger

than a twenty-five cent piece. Few good rods are found at the present time fitted with these exaggerated Kalamazoo guides, although you will occasionally see them in use. They are not necessary; they burden the rod; make the rod unhandy to put in its case; and — do not use them. Of course the idea was to avoid the friction of the out-running line, but experience has proven that the more conservative guides are nearly if not quite as efficient.

The rod may be adequately fitted in the matter of guides in two ways: First, the best and most expensive way, use nothing but narrow raised-agates of moderate size and offset agate tip guide; or, secondly, trumpet guides of German silver with agate hand and tip guides. For long distance casting the raised agates are the thing; but, as in fly-casting, the man who is continually trying to cast "clean across the lake" generally gets more exercise than bass. At any rate use the agate hand and tip guides. Increased ease in casting undoubtedly results and they save line-wear to a very appreciable extent.

Some very good rods are furnished with a finger-rest. While this is more or less a matter of taste, the use of a finger-pull is not at all necessary for good casting and it is better not to use one. They are liable to get smashed and are in the way when casing the rod. The finger-pull was a regular feature of the first short casting rods but is not now so frequently seen; indeed, the present tendency among rod makers is

toward discontinuing entirely its use on the better class rods.

You will have to choose between the single and double handgrasp. In this matter, also, personal preference is a factor. The rod with double handgrasp is more comfortable to fish with, since the rod hand is less liable to become cramped, the upper grasp affording a larger and firmer grip. The single grasp rod has the better action and dispenses with the weight, small to be sure, of the extra grasp. But if you find two rods both equally acceptable to you, one with double grasp, the other with single, choose the former.

Be sure that the construction of the reel-seat is such as to give the reel a very firm attachment. Some form of locking reel-bands, not necessarily complicated or expensive, is preferable.

Cost.

A good bait-casting rod will cost about the same as a fly-rod of equal quality. The best grade split-bamboo rods average about $25.00; medium grade $15.00 to $18.00. Solid wood rods of the best grade in bethabara, greenheart and lancewood, may be had for $8.00 to $12.00; noibwood, $15.00; steel rods up to $10.00. For agate hand and tip guides add $2.00.

Casting from the Reel.

The logical place to discuss casting from the reel is in connection with the casting rod; the reader should, however, to thoroughly understand the following, familiarize himself with the other tackle in use by

reference to the next chapter. It is a good plan, when learning how to cast, to use a surface bait, one that will float when you get into trouble with the reel and line; that is, of course, when practicing over water. It is quite practicable to learn casting over a lawn or any unobstructed place, and in this case a half-ounce dipsey sinker makes a good casting weight, or a tournament weight, furnished by all the tackle dealers, may be used. It is preferable, however, to practice over water. There are two styles of casting from the reel, the side and overhead casts, and of these the side cast is much the easier to learn. When you have acquired the side cast so that you can use it effectively and without backlashing the overhead cast will come more as a matter of course. The side cast is made as follows:

Assemble the rod and place the reel in the reel-seat so that when the rod is held with the reel on top the handle of the reel will be to the right. Reel up the line so that the casting weight or bait hangs about one foot from the rod tip. With neither click nor drag on the reel, so that the spool will revolve freely, and keeping the thumb of your rod hand firmly pressed down on the line wound on the reel, swing the rod to the rear with the rod tip pointing a little downward. Then bring the rod smartly forward and slightly upward across the body in the direction you wish to cast, releasing the pressure of the thumb on the line sufficiently to allow the line to run out through the

guides when the rod has swung about half-way through the cast. The thumb must never be entirely removed from the line as it runs out, but must control the reel and the rendering of the line throughout the entire cast. Otherwise the reel will revolve faster than the line pays out and a backlash will result. Any adequate definition of a backlash is quite unprintable. The whole trick lies in educating the thumb to regulate the reel speed.

Presuming that you are actually fishing, as soon as the bait reaches the water, just prior to which point the thumb should firmly clamp the reel to prevent further rendition of the line, shift the rod from the right to the left hand, the left hand grasping the rod above the reel, and reel in the bait taking care to distribute the line evenly on the reel with the thumb or fingers of the left hand. When using artificial bait care must be taken to keep the bait in motion at all times; so, regulate the shift of the rod from one hand to the other so that, at the end of the cast, the bait will not lie motionless on the water for even a second. With a little practice you will have no trouble in making casts quite sufficient for general fishing purposes, although, probably, you would not shine in a casting tournament. The principle of the overhead cast is exactly the same as that of the side cast. To make this cast, however, the rod is brought back over the shoulder and swung directly forward. Greater distance and accuracy are obtained with this cast than

by the side cast; and the angler should acquire it as soon as possible.

Recapitulation.

Complete specifications for the casting rod should be about as follows:

Material: *For general work a rod of solid wood; noibwood or bethabara preferred. For practice casting and open fishing, split-bamboo.*

Joints: *Three.*

Length: *5½ to 6 feet; the latter recommended.*

Ferrules: *German silver, waterproof, capped, serrated and welted.*

Reel-seat: *German silver; above grasp.*

Handgrasp: *Solid cork; either double or single.*

Guides: *Narrow raised agates are the best; German silver trumpet guides with agate hand and tip guides.*

Plain windings.

CHAPTER IX

REELS, LINES AND ARTIFICIAL BAITS

SIMPLICITY is the keynote of the bait-caster's outfit and is, moreover, one of the potent reasons for the popularity of this angling method. The tackle for bait-casting is far simpler than that required for fly-casting or general bait-fishing for bass. Rod, reel, line, and a few artificial baits which may be easily carried in a small tackle box are, with the exception of a few general angling tools, all that is required. But in the case of reel and line your choice must be made carefully. With the right tackle bait-casting is a matter of little difficulty; with the wrong tackle it is an impossibility. Only one sort of reel and one sort of line can be used successfully for bait-casting.

The Reel.

Bait-casting can be properly done only with a quadruple multiplying reel. For fly-fishing the reel, provided the right kind is used, is a very secondary affair. In bait-casting the reel is the most important item in the entire outfit. You can rig up guides on

an umbrella handle or a broomstick, fit either of them with a good reel, go fishing and catch bass. This involves a confession but I feel impelled to say that once, when bait-casting for bass, I smashed the rod short off at the upper end of the middle joint. Whereupon I discarded the tip and continued to cast with the remains — with no great difficulty but, naturally, with little grace,— and took four good bass after the smash-up. Practically in bait-casting the reel does all the work, and the amount of work it has to do is immense. An average day's fishing will usually amount to about six hours of continual casting, during which the reel is constantly at work, paying out the line at high speed and again recovering it. It goes without saying that a poor mechanism, a reel of cheap material and carelessly adjusted, will be racked apart very shortly. You cannot over-estimate the importance of the reel, or the importance of a good reel if you want to get the most out of your sport.

How the Reel is Made.

The quadruple casting reel has four revolutions of the spindle to one turn of the handle. The reel handle is not, as in the case of the single-action reel, fixed to the spindle directly, but connects with a ratchet which in turn works in a cog-wheel at the spindle end. The ratchet with which the reel handle connects may have 32 cogs to 8 in the spindle ratchet, thus giving four turns of the spindle to one of the handle. This mechanism is enclosed within the plates

on the handle side of the reel, and within the opposite plates are placed the click and drag. Some casting reels are made without the drag and in this connection it may be said that if the reel has a good strong click, sufficient, say, to keep the line from out-running when trolling, the drag is unnecessary. But if the click is not strong there will be many occasions when a drag is needed. All working parts of the reel should be of tempered steel, otherwise its life will be correspondingly short.

The quadruple reel is made for the purpose of casting out a far line, and distinctly not for the purpose of whirling in a fish. But the reel need not necessarily be so finely constructed that it will run for half an hour when the handle is given a start. In fact, a reel of this sort is apt to be troublesome to the angler, productive of backlashes. It follows that the practical angler may dispense with jeweled bearings, insisting only that the reel be well and strongly made, sufficiently free-running, and with its working parts of honest steel — a tool for hard work and lots of it. Jeweled bearings have, however, the virtue of making the reel longer lasting, which is a consideration worth taking into account.

Material.

In the matter of reel material, while many reels are made of hard rubber and German silver in combination, almost all the good casting reels are made of solid metal, principally of German silver, cheaper ones being furnished

in nickel. Aluminum is also used, particularly for the spool.

Size and Shape.

As noted below, the line for bait-casting is of very small caliber and it follows that a large reel is not needed. Casting lines are sold in fifty-yard lengths, and to hold this amount of line a sixty-yard reel is quite large enough. The multiplying reel holds practically the amount of line called for by the trade size, this not being the case, as above noted, with the single-action reel. The next size reel, 80 yards, requires, when 50 yards of line are used, a core of line, cork or wood to fill up the reel spool before the casting line proper is wound on. Some casters build around the reel spindle a core of cork or wood; but this is a troublesome affair in case the angler wishes at any time to use more line than allowed for when fitting the core. It is better simply to wind on a core of cheap line although this is apt to work loose and cause soft and uneven spooling of the line. On a light split-bamboo casting rod use a small reel. For solid wood or steel rods any of the 80-yard reels will do.

In shape the reel should be long in the barrel, that is, between the end plates, and the end plates should be of small diameter, thus differing from the ordinary double-multiplying reel in which the spindle is usually short. The long barrel facilitates thumbing the reel. Reels having even-spooling or self-thumbing devices are on the market, the idea being, it seems, to make

any skill on the part of the caster unnecessary. Reputedly they do what is claimed for them; personally I have never used one. It seems to me that there would not be much sport in using a self-aiming rifle or an auto-striking trout fly, and that there would be very little more enjoyment in using a self-thumbing reel. Mechanical advancement in the manufacture of rifles, reels and the like, is a praiseworthy thing until it reaches a point where skill on the part of the user is partially or wholly eliminated. When a sporting tool reaches this stage of "advancement" it ceases to be desirable.

The Reel Position.

The position of the multiplying reel on the casting rod is properly on top of the rod with the handle to the right for the right-handed caster. If you go into the literature of casting for bass to any extent you will find that another method, with the reel underneath the rod — that is, turned underneath when reeling in — is strenuously advocated by certain writers. Have the reel on top, handle to the right, and keep it there both when casting and retrieving. This is the advice and practice of experienced bait-casters almost to a man. The reel, when placed in this way, is far easier to keep under constant control either when thumbing the outrunning line or spooling the line when reeling in.

As regards the amount to pay for a bait-casting reel — you can go pretty nearly as far as you like. Sixty dollars is about the top price for a stock quadruple-

multiplier, and $2.00 is about as low as you can go.

Cost.

Bearing in mind how delicate, in a way, the mechanism of a satisfactory casting reel must be, a matter of as accurate adjustment as the assembling of a fine scientific instrument or watch, and, also bearing in mind the amount of hard work the reel must do, it is evident that the two-dollar reel will not be quite the thing. On the other hand it is hardly necessary to sink $60.00 for a reel. A certain very popular reel used a great deal by tournament casters and also for fishing, costs, full-jeweled, $37.00. The same reel without jewels is $20.00. A reel of this quality is quite good enough for anyone — entirely too good for a great many. The reels most frequently seen in use on lakes and streams in the woods, as distinguished from those generally observed in use on artificial casting pools in parks or Madison Square Garden, may be had for something between $6.00 and $15.00. Some, not all, of these reels are very good ones for practical fishing and, if well cared for, will last a long time.

Take good care of the reel. Use a light, clean oil upon it sparingly but frequently; and keep the reel free from sand and dust on the outside.

Care of the Reel.

If the reel you select is one of the various take-apart reels, why, take it apart; but if it is not of this sort, by all means leave it together. Probably you would not attempt the taking-down and assembling of a watch, and a

finely adjusted quadruple reel is worthy of equal respect. If you are one of the people who insist on "seeing how it works" practice a little self-restraint in this respect; curiosity has spoiled numberless good casting reels. If anything goes wrong with the reel let an expert right it; otherwise you may have to get a new one.

The Line.

The line for use in bait-casting must be a very small caliber silk line with no waterproofing or enameling whatever. It should be braided rather than twisted to avoid kinking as far as possible. It should also be soft braided rather than hard braided. The hard braided line does not spool as closely and well as the soft braided, and, moreover, is apt to be hard on the caster's thumb, wearing the skin down to the "quick" in a few hours' casting. Two sizes are commonly used in fishing, sizes G and H, and a size even smaller than H, known as "tournament" is sometimes used.

Never attempt to do bait-casting with a line larger than size G. A large caliber line builds up so quickly on the reel spindle that, unless the very greatest care is taken in spooling, more care than one wishes to exercise when fishing, a few turns of the reel handle will result in a bunch of line thick enough, if the reel is pretty well filled, to foul against the pillars of the reel. For average fishing, then, use a size G soft braided

silk line. They come, as above noted, in 50-yard lengths, one length being quite enough to use, and an average price for a good line is $1.25. The color is rather immaterial.

The bait-casting line having no waterproofing or enameling, and having to undergo the hardest sort of treatment, being whipped out through the rod guides numberless times in even a day's fishing, must receive the very best of care or it will be rendered absolutely worthless in a very short time. If you wish the line to last any time at all it must be thoroughly dried out after every time it is used; otherwise, if left undried on the reel, only the outer windings will dry, the inner ones remaining wet for a good many hours; and it is obvious that with this sort of treatment the line, no matter how good it is, will rot very quickly. Before every day's fishing test the first two or three feet of the line. The friction from casting will whip out this part of the line, and frequently you can tear off a foot or two without applying any degree of force. Strict observance of this rule will save you several dollars worth of artificial baits the season and a good many good bass. Drying the line is a very simple matter. You do not need a nickel plated windlass or any other sort of patent contrivance. Simply draw the wet part of the line from the reel, laying the coils evenly to avoid the danger of tangling, on the floor, a table or a chair seat.

Artificial Baits.

It is not so many years ago that the only artificial baits used consisted of spoons in various styles, phantom minnows, and divers rubber bugs. As noted above the new method of casting from the reel greatly stimulated the use and production of artificial lures and, at the present time, the bait-caster may make his selection from a great many different sorts, some of which are very good and others very bad. Classification of these baits in general shows two well differentiated sorts; sinking baits and surface baits. Although not entirely, the greater part of the recently introduced lures belong to the first of these classes. Generally speaking the surface baits are only successful in rather shallow water, two to eight or ten feet, and are, therefore, only to be used when the bass are in the shallows. Of the sinking baits the wooden minnows are the most numerous, are very extensively used, and the best ones are usually very successful.

Wooden Minnows.

Of the under-water minnows — the wooden minnows are made for both surface and submerged fishing — one of the best is the "rainbow," made by a well-known manufacturer of casting baits. This minnow has a green back, yellowish sides, and pink-to-white belly. As usually furnished it is fitted with three burrs, or treble hooks, and with spinners fore and aft. The "fancy

back" minnow, of the same make, with green and white mottled back and white belly, is also very successful. The same minnow is furnished in red, white and other colors. When moving through the water their action is very life-like, and they cast easily and accurately, the weight being about three-fourths of an ounce. The body material is cedar painted with several coats and enameled, and so weighted that the minnow always runs true. The spinners revolve in opposite directions and, since the minnow itself does not revolve, there is no necessity for swivels. They are made in various sizes, the smallest being the one to use. They are also furnished with single hooks as, indeed are all the other casting baits mentioned herein. The angler who does not favor the use of treble hooks, and many very rightly do not, may have the baits fitted with either single or double hooks to his order.

Phantom Minnows.

Phantom minnows are now made weighted for casting from the reel. They are furnished in pairs, the individual minnows made to revolve in opposite directions and to be used in turn to avoid kinking the line. Of these the silver-and-blue is generally the best.

Trolling and Fly-spoons.

Other under-water casting baits are the various kinds of trolling spoons and the single-hook fly-spoons and spinners. Every angler is familiar with the trolling spoon. Used as a casting bait its efficiency is

very greatly increased and its use for bait-casting is very general. A very favorable fact in regard to the trolling spoons and fly-spoons is that while, perhaps, they do not induce as many strikes as do the wooden minnows or weighted phantoms they are more apt to hold the bass when hooked than are the heavier baits; this for the reason that, when the bass comes out of the water and shakes himself, the weight of a wooden minnow or other comparatively heavy bait affords the fish a very substantial leverage and he is quite likely to free himself. The spoons and small spinners being light and with several loosely moving joints do not give this leverage. For bass and other general bait-casting No. 2 or 3 spoons are the best. Spoons are furnished in a multitude of shapes, hammered, fluted, tandems, etc., but, as a matter of fact, there is very little choice between them; and, such being the case, the angler should select a spoon which has no tendency toward freakishness. Use only the very best spoons you can find, for in this way only is it possible to get hooks upon which you can depend. The cheap spoons are fitted with very cheap hooks. A very fine casting bait is a "bucktail" spoon, especially good for bass.

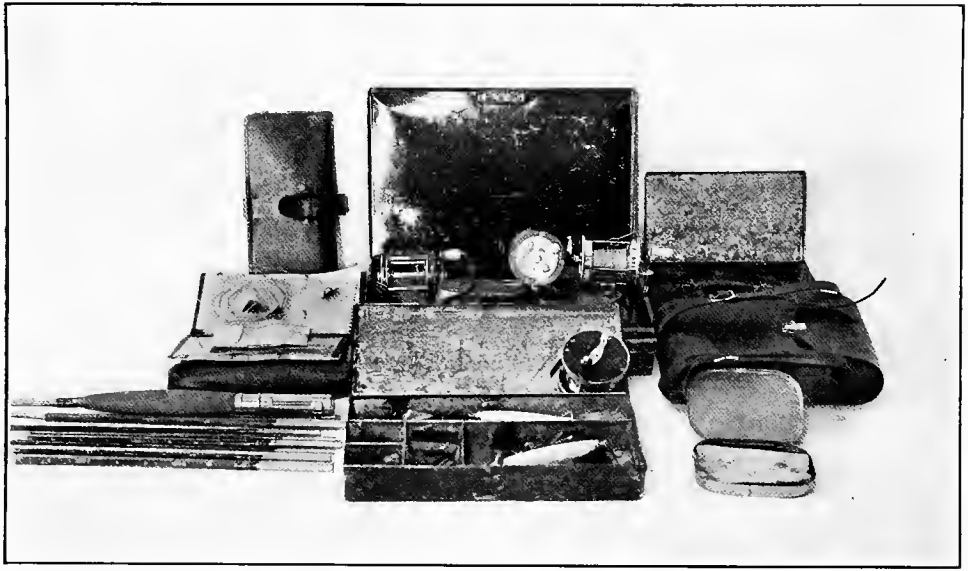
The single-hook fly-spoons, small, light spoons with very thin blades, used in connection with rather large-sized bass flies of approved patterns, coachman, Montreal, scarlet ibis, royal coachman, silver doctor, and others, are a necessary part of the bait-caster's kit. The fly-spoons of this sort, made in a very adequate

assortment of styles and sizes, by one well-known tackle maker who makes a specialty of them, are especially fine. The flies are well tied, and true to pattern, piano-wire shanks and no swivels are features, and it would be difficult to praise them too highly — they are "good tackle." For casting light baits a small dipsey sinker should be used.

Surface Baits.

Some of the best of sport in bait-casting is to be had when the bass are lying in the shallows and will rise to a surface bait. The swirl and vigor with which a two-pound, well-conditioned bass strikes a floating bait, followed by a fight always close to the surface and usually with several strenuous jumps in close succession, place this branch of bait-casting in a class by itself. In a way it has the charm of fly-casting — the visible strike of the quarry. But the accustomed fly-caster, habituated to the delicate lures of his craft, will require some time to become reconciled to the size and appearance of the most successful floating baits for bass. However, the success and sport which, under favorable conditions — under favorable conditions, too many writers have made it appear that the method is at all times infallible — are such that the angler can well afford to forego too strict conservatism.

The wooden minnows mentioned above are also made for surface fishing; but in this form they are rather large and make too much fuss in the water for very successful use in civilized waters. In addi-



All sorts of "Tackle." Pocket Fly-rod, large Fly-book and Stock Fly-book; Tackle Boxes, No. 3 Camera, Leader-box

tion to these there are three well-known surface baits. The first of these is an imitation made of cork and felt of one of the favorite pork-rind baits of the Western bait-caster. The body is made of white enameled cork with small side wings of red felt and it has a tail of red feathers. Its imitative purpose is two-fold, to represent a large insect while in the air (on the theory, a true one, that a bass sometimes starts for a bait while it is still in the air) and a minnow when in the water. Whether the bait actually fills this rather versatile bill is a question; there is no question, however, about its catching bass. This bait, too, is practically weedless, more so than any other surface bait, and, consequently is a good one to use when the bass are lying close in-shore among weeds and rushes. It is a single-hook lure but is generally used with an auxiliary trailer-hook, in which form it is most successful, three out of five bass being taken on the trailer.

Another surface bait is what has been called "plug shaped," is principally white in coloration, and derives its bass-attractive motion from a metal collar placed well forward. This bait is universally and very successfully used by the devotees of surface bass fishing. Of all surface baits this one is, perhaps, the best calculated to arouse the well-known pugnacious instincts of a black bass, and his fighting blood will often cause him to rise to it when a smaller or less conspicuous lure would receive scant attention.

One of the first top-water baits to receive the ap-

probation of the black bass is variously known as the Yellow Kid, Jersey Queen, and by other names. It is furnished by all the tackle dealers. Consultation of a general tackle catalogue will identify the above baits without difficulty. There are many others, some perhaps quite as good, and others of no use whatever.

Additional Tools.

The bait-caster should have in his tackle box a small screw-driver, pliers, and a "one-drop" oiler filled with a light, clean oil. Occasionally one of the screws in the reel will work loose and in such case the screw-driver will come in very handy. The pliers will be needed quite often for tinkering trolling spoons and other casting baits. Occasionally the reel will need oil when you are fishing — when the oiler will save you from finishing out the day with a dry reel the same being good for neither reel nor angler.

CHAPTER X

GENERAL SWEET-WATER TACKLE

THE greater part of fresh-water fishing tackle is made for the purposes already discussed; namely fly-fishing for trout and casting for bass. Tackle selection for either of these angling methods must necessarily be careful, and if the outfit is to be exactly suited to the required purpose there is little room for choice between this rod or that one or, say, between two styles of reels — the tackle is either suitable or proves very plainly unsuitable. But, barring bass fly-tackle and tackle for salmon fishing, the latter, of course, with the fly, it is not so very easy to draw a hard and fast line between what is right or the contrary for the several other sorts of fishing. In various forms of still-fishing and trolling all sorts and condition of rods, reels and other tackle are used effectively; consequently, the suggestions here offered are not to be taken as positive advice against the use of other and somewhat different tackle than that mentioned herein.

As regards bait-fishing for trout and the proper rod to use for the sport, I think that the very best advice

that can be given is, no matter what sort of a rod you use, not to use your fly-rod. If you have the right fly-fishing spirit you will not care to use bait except when the trout are ground-feeding and will not rise to the surface. The steady strain, in swift water, which a rod has to undergo in this sort of work is best put upon some other rod than a fine one of split-bamboo.

Bait-tackle for Trout.

Also, it seems to me that the following is good advice: Do not use a regular bait-rod, that is, a rod with the reel-seat above the hand. A rod of this sort is all right for fishing from a boat, but for stream fishing for trout it is undesirable. A rather short, sturdy fly-rod, with the reel-seat below the hand, where you are — or eventually will be if you become a worthy fly-caster — most accustomed to it, is far better. A split-bamboo rod, if it is any good at all, is too good to use for bait fishing. A well-made solid wood rod is perfectly good for the purpose; and it should be the opposite of whippy. Personally I think that one of the shorter length and lighter weight steel fly-rods cannot be beaten for all-round trout bait-fishing.

If you use a rod with the reel-seat below the hand-grasp the single-action reel is the best to use in conjunction therewith. If the reel-seat is above the hand, and the reel is placed on top of the rod, neither of which things is desirable, although it is, of course, more or less a matter of personal opinion, a double-multiplying reel may be used.

No need to use a very expensive line for bait-fishing, and it should be of smaller caliber than for fly-casting. Twenty-five yards of size G "oiled silk" line will fill the bill. However, an enameled line, although not necessary, is less liable to whip around the rod and for this reason will give better satisfaction.

For average worm-fishing a supply of Sproat hooks from No. 5, no larger, to No. 8, on gut snells, should be laid in.

While, perhaps, it is more than a mere matter of taste, many experienced trout fishermen do not employ leaders when worm-fishing. For surface bait-fishing, with low and clear water — a good time for dry flies and midges — it seems that leaders are preferable. Three-foot leaders are long enough.

Choice of lead lies between ringed sinkers and split-shot. The former are easier to put on and take off. The best style of bait-box is crescent-shaped and worn on a belt. In all other particulars the tackle is the same as for trout fly-fishing.

Bass-Fly-tackle.

Unfortunately, reliable bass fly-fishing is rather difficult to find. This, it should be said, is through no fault of the black bass, but, rather, because most bass waters are more adapted to bait-casting and other forms of bait-fishing with artificial and natural baits than to fly-fishing. For this reason, except in certain favored localities where stream fly-fishing for bass is done in much the same way as one wades a trout stream, the

majority of anglers use their trout tackle, with large size trout flies, for such occasional bass fly-fishing as they may find. However, the angler who intends to make a specialty of bass fly-fishing should outfit in a slightly different way.

The rod for bass fly-fishing should by all means be of split-bamboo. Ten feet is a very good length, and a rod an ounce or so heavier than the trout fly-rod and with a stiff backbone should be selected. The guides and other mountings should be exactly the same as for the trout fly-rod. With a rod such as the above, twenty-five yards of waterproof, enameled silk line, either level or tapered, size E, should be used.

A single-action click reel, 100-yard size, is most suitable for the rod and line above specified. For bass fly-fishing a double-multiplying reel may properly be used, but is not recommended because of its liability to foul the line. The quick retrieve of the double-multiplier is sometimes of advantage when playing a large bass from the reel. If a multiplier is used select the 80-yard size.

Leaders for bass fly-fishing should be of the caliber most commonly known as "regular bass." The six-foot length should be selected — or made — and it is best to use only one fly, so the leader need not have dropper loops. Where small flies are used, such as the larger size trout flies — and these are recommended by many experienced bass fly-fishermen — one dropper fly may be used.

Regulation bass flies are tied upon Nos. 2, 4 and 6 hooks, and some even larger on Nos. 1 and 1-0; but these last are most suited to trolling. Flies on 4 and 6 hooks are plenty large enough and best suited to almost all bass waters.

Here is a list of good bass flies: Coachman, Henshall, oriole, royal coachman, silver doctor, Ferguson, Montreal, Parmachene Belle, scarlet ibis, grizzly king. Also the various hackles and palmers.

Other necessary articles for the bass fly-fishing kit, all of which have been above described, are: Leader box, fly-book, creel, etc. See chapters on trout fly-fishing. The subject of bass fly-fishing is, of course, entitled to much more extended treatment than is here accorded it; but the tools and tackle for the same so closely approximate those required for trout fly-casting that, in view of the above rather full treatment of the latter, further discussion seems unnecessary here.

Trolling Tackle.

Trolling is a favorite and effective method of taking bass and other game fish and the tackle required is not at all complicated. As a usual thing the angler can assemble a good trolling outfit from his general kit. The rod may be of any sort — it is taken for granted that you will not care to troll with a hand-line — but should be a stiff one. For the reason that a quadruple-multiplying reel has not the winding-in power of a double-multiplier the latter should be used. Any

of the artificial casting baits mentioned in Chapter 9 are also suited to trolling. The top-water baits, in particular are good to troll with since they do not get fouled easily and do not sink to the bottom when for any reason the boat is stopped.

Be generous in your use of swivels, for of all methods trolling is most apt to throw a kink in the line; and for this reason it is best not to use a line upon which you depend for bait-casting. Also, do not use a light split-bamboo casting-rod for trolling, since the steady deep-water strain is liable to give it a set. If your favorite fishing is fly- and bait-casting your reel outfit will probably consist of single-actions and quadruple-multipliers. In this case get a double-multiplier, 80-yard size. A very good one can be had in rubber and nickel for $4.50. Use 50 or 75 yards of F or G oiled silk line. Be sure that the reel has a strong click so that, when trolling, the line will not run out when the thumb is removed from the spool.

Still-fishing Tackle.

Still-fishing with live minnows and other natural baits is the most universally practiced method of fishing. Most of the people who "go fishing" never learn to cast either fly or bait — which is not saying that some experienced anglers do not employ still-fishing methods. But, as purely a matter of sport, the action and interest and, moreover, the skill required for fly- or bait-casting, are such that the two, still-fishing and casting, are hardly comparable.

Still fishing is usually done from a boat and, for the reason that it is well to get the bait as far as possible from the boat, a rather long rod is best. For boat fishing a rod with the reel-seat above the hand is most practical. The steel rods are excellent for the purpose or any solid wood rod will do. A 60- or 80-yard double-multiplying reel is right, with 25-yards of G line. No. 4 and 6 Sproat hooks, on strong snells, should be used. Use very small ringed sinkers.

The Minnow Casting Rod.

The Henshall casting rod, mentioned in the discussion of the bait-casting rod, or a rod of similar dimensions, should be used for casting the live minnow. This rod is 8¼ feet in length and should be mounted as regards reel-seat, guides, etc., in the same way as the short casting rod. The short rod is not adapted to casting the natural minnow since the quick start of the overhead cast is too apt to snap off the bait. The line and reel are the same as for the shorter rod. The Henshall is a good rod, also, to use for casting light spoons and spinners. This style of casting rod is adapted only to the side cast.

Salmon Fly-tackle.

Comparatively few anglers have ever enjoyed the privilege of fly-fishing for salmon in the famous Canadian streams where this sport, undoubtedly the highest form of angling, is found at its best. But many anglers now take advantage of the salmon fishing offered by the non-preserved waters of Nova Scotia and New-

foundland, where the sport, if not equal to that offered by the classic Canadian rivers, is still strictly worth while. For this reason — the subject hardly comes properly under "general" sweet-water tackle — it seems best to include here a few suggestions about salmon fly-fishing tackle, although it may be said that the angler who has the ambition to tackle salmon will, beyond doubt, know more about salmon tackle than it is possible to tell him herein.

If you can afford it select a rod of split-bamboo; these may be had for from $30.00 to $50.00. Solid wood rods of greenheart and noibwood are, however, very extensively used, and an average price for a rod of this sort is $25.00. The prices given are for rods 14 or 15 feet in length, and these lengths are the best. The standard length of the salmon fly-rod adopted for tournament casting is 15 feet. Salmon fly-rods, since both hands are used in casting, are built with double hand-grasp. Other fittings such as "snake" guides, etc., should be the same as for the trout fly-rod.

A single-action click reel, supplied with a reliable drag, to hold 100 yards of C or D enameled line is right for the rods mentioned. A salmon fly-reel of this size, in German silver and rubber will cost about $22.00; in nickel and rubber $14.00. A double-tapered enameled line, size C, 120-yard length, costs $11.00. Regular, level, enameled silk line, the same as used for trout fly-fishing but in the larger sizes, averages $1.50 for 25 yards. Economy may be prac-

A good spot to cast; where the stream widens out

ticed in this regard by using 50 yards of silk line spliced to a length of cheaper but good linen line.

Nine-foot leaders should be used and these may be made from three-foot lengths of heavy, medium and light gut, or, where the fish run large, extra heavy, heavy and medium gut. Nine-foot salmon leaders may also be made from lengths of triple-twisted, double-twisted and single gut. Use only the very best gut, and test it.

The best salmon flies are: Silver doctor, black fairy, Durham ranger, Jock Scott, silver gray, brown fairy, dusty miller, Nicholson, black dose. Of these the silver doctor and Jock Scott are the best. They should be tied on No. 2 and 4 hooks. A few flies on 1 and 1-0 hooks should be in the book for high water and evening fishing. Double-hook flies are also used. Salmon flies are not listed in the same way as trout flies. Each salmon fly has its own price according to the greater or less expense of tying it; for instance, the silver doctor costs $6.50 a dozen, while the Jock Scott is $7.00. Others range from $3.50 to $6.50 the dozen.

Leader-boxes and fly-books have been discussed in the chapters on trout-fly-fishing. Small salmon may properly and preferably be netted or beached; larger fish must be gaffed. Experienced salmon anglers prefer to use a gaff made by lashing a gaff-hook to a stout handle. The gaff-hook may be procured at any good tackle store. This saves, also, the trouble of packing

a gaff into the woods. Gaffs, complete and very well-made, with take-down handles, may also be had.

Tackle for Mascalonge and Others

The present day tendency of anglers is very strongly toward the use of light tackle. The fresh-water angler who has followed the achievements of sea anglers in the use of light tackle and marked their success with the tarpon, tuna, and other large salt-water game fishes, logically concludes that even for the largest fresh water fish it is not necessary or sportsmanlike to use very heavy tackle. This, of course, is exactly as it should be. The sporting qualities of any game fish depend very largely upon the tackle used. It is far more sport — and certainly far more sportsmanlike — to land one good fish on light tackle than a dozen on heavy. But extremely light tackle is not advised for the beginner. Assuredly the expert who kills his twenty-five pound mascalonge on a little, five-ounce bait-casting rod, using a small, light reel and line, deserves to be ranked among the elect. With equal certainty the man of no experience who tries this on may properly be ranked among the foolish.

As good a rod as any for mascalonge fishing, either casting or trolling, is the Henshall casting rod above described. A rod of this sort, if handled with average skill, will answer all requirements. It should weigh 8 or 9 ounces, and should be fairly stiff. Any sturdy bait-casting rod, not less than six feet in length — steel rods are used to some extent — will do. An

80- or 100-yard casting reel, E or F line, braided silk, the latter size preferably because it will work better in casting, and No. 4 and 6 trolling spoons, are suitable. All of the bass casting baits mentioned in Chapter 9, some of them made slightly larger and stronger, are used in casting and trolling for mascalonge. The mascalonge, in common with the pike and pickerel, has an innate fondness for green and white, and the fancy-back minnow, above described, is a very successful one. A light steel-wire leader should always be used. In this connection it should be said that gimp leaders, for any sort of fishing, are not to be trusted. They will smash without any previous warning at all visible to the angler. A strong gaff must also form a part of the outfit. A plan sometimes followed is to shoot the fish through the head with a .22 pistol or rifle. The advantage of this is that the fish is dead when he comes into the boat — sometimes a very great advantage.

For either pike or pickerel ordinary bass tackle may properly be used, with the addition, as in the case of the mascalonge, of a metal leader. For pike larger spoons should be used than for pickerel, about the same as for mascalonge.

Lake Trout Tackle.

Early in the spring lake trout may be taken on ordinary fairly light trolling tackle, trolling on the surface. With the arrival of warm weather, however, these fish seek the very deepest portions of the lake, and

then deep-trolling is the only practicable method. Until within a few years the only way to deep-troll for "lakers" was by using a long, strong hand-line, a dipsey sinker averaging about a half-pound in weight (the last on a short sinker-line attached to the main line by a three-way swivel) and on this formidable arrangement a gang consisting of three or more burrs, or trebles, and a lip-hook was used; a large minnow being used for bait.

All this has been changed, and very much for the better, by the introduction of a line made of braided copper wire which, by its own weight and without the necessity of using sinkers, attains the proper depth. This line is so extremely well and finely made — of very fine strands of copper wire braided over a silk core — that it can be used on a reel without the slightest trouble. Consequently, hand-lining for lake trout is no longer necessary or excusable. For lake trout, then, use an 8- or 9-ounce trolling rod, and 100 yards of braided copper wire line. This line costs about $2.00 for 50 yards. A special reel for use with this sort of metal line is furnished by the dealers. Various natural and artificial baits are used for lake trout, but, in general, it may be said that artificial bait is not over-successful with lakers. It is better to use the natural minnow on a single hook or an archer spinner. Deep-trolling may also be profitably done for bass and pickerel when they are in deep water in the summer-time.

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